

STICES OFFICE  
 PUBLISHED EVERY WEEK. \$1.50 PER YEAR.

# THE FARMER'S ADVOCATE

AND HOME MAGAZINE

PERSEVERE  
 SUCCEED  
 FOUNDED

\* AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE.\*

ENTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875

Vol. XLV.

LONDON, ONTARIO, JULY 28, 1910.

No. 931

**Bell Pipe Tone Organs**

THE MOST SATISFACTORY ORGANS FOR HOME USE

IN BUYING A

**Bell Organ**

you secure one with the charming tone of a pipe organ, and at a price that will please you. Buy a Bell and get the best made. We are the only makers of the patent Pipe Tone Reed Cells. Send for free catalogue No. 40.

The BELL Piano & Organ Co.  
 GUELPH, (Limited.) ONTARIO.  
 Largest makers of Pianos, Organs and Player-pianos in Canada.

**STEWART M. GRAHAM**  
 PORT PERRY, ONTARIO.  
 Pedigree live-stock and real-estate AUCTIONEER.  
 Graduate of James' National School.

When Writing Mention This Paper.

**THE DE LAVAL FAMILY**

There's more than a million in it—  
 all related through their bond of  
 satisfaction with the



**DE LAVAL**  
**Cream Separator**

THE BEST

The De Laval Separator Co.  
 173-177 William Street  
 MONTREAL

Catalogue Free  
 Agents Everywhere WINNIPEG VANCOUVER

**Anti-Trust Prices Freight Prepaid To You—No Duty**

**on FARM and TOWN**  
**Telephones and Switchboards**

Poles, Wire, Brackets, Insulators, Tools, Lightning Arresters, Ground Rods, Batteries, Insulated Wire, and everything necessary.

**NO CHARGE** for our experts' letters of advice, drawings, explanations, instructions, telling you in any language, non-technical, just how to build, own and operate your rural, town or long distance lines in a good but economical way and at a profit, thereby getting your own telephone free.

We are the largest, exclusive and the only bona-fide Independent Telephone and Switchboard makers in Canada or Great Britain.

Our Telephones are extensively used in Canada, England, France and by the U. S. Government.

Our great illustrated book on the Telephone sent Free to anyone writing us about any new Telephone lines or systems being talked of or organized.

We have a splendid money-making proposition for good agents.

The Dominion Telephone Mfg Co., Ltd. Dept. C. Waterford, Ont., Canada.

**Genasco Ready Roofing**

Cross-section, Genasco Smooth-surface Roofing

Trinidad Lake Asphalt  
 Asphalt-saturated Wool Felt  
 Trinidad Lake Asphalt

No mystery about what it is made of. Look for the trademark at your dealer's. Ask him for the **Kant-Jeak Kleest**, and save time and labor in laying the roofing. Write for samples and the Good Roof Guide Book.

**THE BARBER ASPHALT PAVING COMPANY**  
 Largest producers of asphalt, and largest manufacturers of ready roofing in the world.  
 PHILADELPHIA

New York San Francisco Chicago  
 Roofer's Supply Co., Ltd., Bay and Lake Sts., Toronto.  
 D. H. Howden & Co., Ltd., 200 York St., London, Ont.  
 J. L. Lachance, Limited, Quebec.

**A REAL EDUCATION**

for its students, with mental, spiritual, and physical development, in an ideal home environment—with thorough instruction, and agreeable social relations, is the purpose of Alma College. Your daughter will enjoy life here, because

**ALMA COLLEGE**

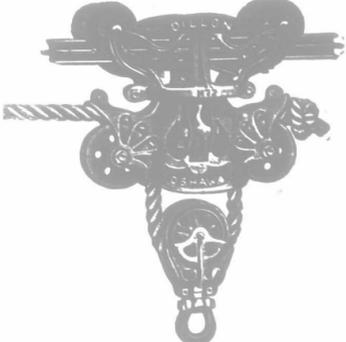
is attractive in situation, with ample grounds. Good food, home cooked. Rational exercise. Classics, art, music, domestic science, commercial, elocution and physical culture. Tuition low. Picked faculty. Address the president, Robt. I. Warner, M.A., D.D., St. Thomas, Ontario, for prospectus and terms. 11

*A. C. College*

Catalogues of this long-established school will be sent to any address upon request.

**Forest City Business and Shorthand College**  
 London, Ontario.

J. W. WESTERVELT, JR., C.A., VICE-PRINCIPAL. J. W. WESTERVELT, PRINCIPAL.



For Hay Tools, Litter Carriers and Hardware Specialties

# R. DILLON & SON

SOUTH OSHAWA, ONTARIO.

## Did You Ever Think That Your Stable is a FOOD FACTORY?

WITH "BT"

### Steel Stalls and Stanchions

YOU CAN HAVE A PERFECTLY SANITARY STABLE.

A stable bright and comfortable for the cows.  
A stable that will last. No woodwork to rot out.  
A stable that is easy to work in; quick to tie and untie the stock.  
A stable that will hold more cows than with any other style of construction.

Fig. 194 shows the "BT" STEEL STALLS with LIFTING MANGER. There is some satisfaction in a stable like that. Do not put in an old-style construction that you will regret for years to come, and that will constantly be in need of repair. The cost of "BT" Steel Stalls is very little greater.

If you are building or remodelling your barn, write us for our catalogue on Stable Construction. It will pay you to find out why "BT" Stanchions and Steel Stalls sell ahead of all others.

In writing mention how many cattle you will tie up.

**BEATTY BROS., FERGUS, ONT.**

We also build HAY CARRIERS and the "BT" LITTER CARRIER.

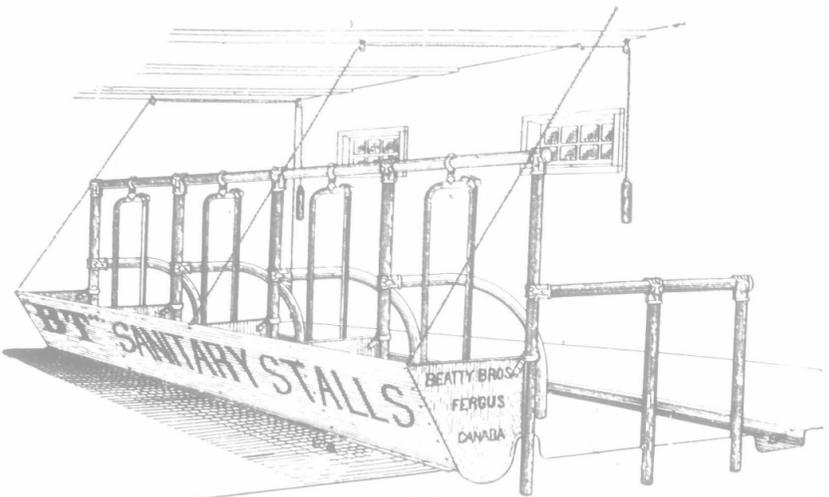


FIG. 194

"BT" Sanitary Steel Stall.

## STICKNEY Gasoline Engine



Just suits the  
**CANADIAN FARMER.**

It is simple in design.

Does not easily get out of "kilter." Your boy can start it.

### LOOK HOW COMPACT.

No conglomeration of tank and pipes always in the way.

Booklet No. 57 will post you on the principles of Gasoline Engines.

**Ontario Wind Engine & Pump Co. (LIMITED), TORONTO, CANADA.**



### "ELECTRO BALM" CURES ECZEMA,

Also Piles, Burns, Scalds, Chapped Hands and Face.

Gentlemen use it after shaving. This Balm is handled by the best firms, and is highly recommended by those who have used it.

Write for Free Sample 50c. a Box at all Dealers or upon receipt of price, from THE ELECTRIC BEAN CHEMICAL CO., Ltd., OTTAWA.

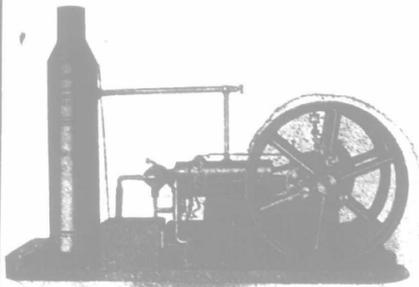
### BINDER TWINE!

Central Prices for Binder Twine as compared to former prices.

600 ft per lb. 3c per lb.  
500 ft per lb. 2.5c per lb.  
400 ft per lb. 2c per lb.

## IDEAL GASOLINE ENGINES

1½ TO 40 HORSE-POWER.

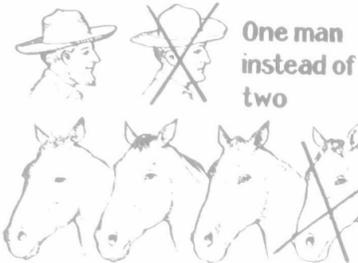


Windmills,  
Grain Grinders,  
Pumps,  
Tanks,  
Water Boxes,  
Concrete Mixers,  
Etc., Etc.

SEND FOR CATALOGUE.

**Goold, Shapley & Muir Co., Limited BRANTFORD, CANADA.**

## What the "Crown" Gang Plow does



One man instead of two

Make this test: The first day give your hired man a single-furrow plow and two horses. Take another single-furrow plow and two horses yourself. Then, do one day's plowing. Together, you will plow three acres, under favorable conditions.

Next day, use the "Crown" Gang plow and three horses. You'll find that you can still plow three acres.

Three horses instead of four

The second day the same work has been done with one man instead of two, three horses instead of four, one "Crown" Gang instead of two single-furrow plows. What this saving means to you in dollars and cents you can figure out for yourself. But it is enough to pay for the "Crown" Gang in a few weeks.



One "Crown" Gang Plow instead of two single furrow Plows

The "Crown" Gang stays right down to its work. It turns the furrows more evenly than a single-furrow plow. The easy-working levers are conveniently located. The wheels have dust-proof boxes with roller-bearings. You should learn more about the "Crown" Gang right away, and about our special orchard gang plows, too. So write for CATALOGUE F40.

FROST & WOOD CO., LIMITED, SMITHS FALLS, CANADA.

# Frost & Wood

WHEN WRITING ADVERTISERS PLEASE MENTION "ADVOCATE"

# 3 1/2 %

You might better place your savings here where they will earn 3 1/2%, instead of 3%. Security, \$2,000,000 assets.

**AGRICULTURAL SAVINGS & LOAN CO., 109 DUNDAS STREET, LONDON, ONTARIO.**

## Richelieu & Ontario Navigation Co.

The delightful fresh-water trip from "Niagara to the sea."

Steamers "Toronto" and "Kingston" leave Toronto at 3:00 p.m. daily for Charlotte (port of Rochester), 100 Islands, "Shooting the Rapids," Montreal, Quebec and Saguenay River.

Steamer "Belleville" leaves Hamilton at 12:00 noon and Toronto 7:30 p.m. every Tuesday for Bay of Quinte, Montreal and intermediate points.

For tickets and berth reservations apply to local agents, or write:

**H. FOSTER CHAFFEE, A. G. P. A., Toronto, Ont.**

## 60,000 Acres

OF CHOICE FARM LAND WESTERN CANADA.

Excellent selections within a few miles of main line of railways. Prices and terms very reasonable. Call and see us, or write for literature.

**The Union Trust Co., Ltd., Real estate Dept., 174-176 Bay St., Toronto, Ont.**

GOES LIKE SIXTY SELLS LIKE SIXTY SELLS FOR \$65  
**GILSON GASOLINE ENGINE**  
For Pumping, Cream Separators, Churns, Wash Machines, etc. Free Trial. Ask for catalogue.  
**GILSON MFG. CO., 150 York St., GUELPH, ONT.**

# The Farmer's Advocate and Home Magazine

"Persevere and  
Succeed."

Established  
1866.

REGISTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875.

Vol. XLV.

LONDON, ONTARIO, JULY 28, 1910

No. 931

## EDITORIAL.

Well-tilled and well-nourished soils laugh at the drouth.

In all seriousness, the question is now being asked if horns on cattle are worth what they cost?

An average loss of six cents a dozen on mid-summer eggs taken out of the producer by reducing the prices paid! Whew!

Middlesex Co., Ont., farmers have been enjoying life in the cornfield by attaching an old egg-top to the two-horse cultivator during the late "hot spell."

On any farm large enough to employ three or more horses, we would no more think of going out to plow or work the land with two horses than we would think of going out to plow with one. It is killing time.

Both Messrs. Brant and MacNeilage have seemed to concur in our heading placed over the farmer's first letter, viz., "The Beam and the Mote." The only trouble is they cannot agree in whose eye is the beam, and in whose the mote.

Has your cheese factory a cool-curing room? Does its pasteurize its whey? Does it pay by the Babcock test (plus 2)? Do all the patrons cool their evening's milk? Are they all scrupulously clean? If not, there is need for missionary work in your section, as in others.

Young man, which is it to be—a life of unilluminated money-grubbing, or one of intelligent, well-directed, satisfying effort? If the latter, you should make preparation now. Procure the calendar of your nearest agricultural college, and plan yourself a course. Take common sense with you; bring back knowledge and inspiration.

One of the worst troubles with the cheese business is that so many patrons think they have done their part sufficiently well and have no further interest in their milk once it is past the cheesemaker's nose. If they could only be brought to realize that it is their milk and their cheese, and that their real interest is bound up in the goods until it has passed the consumer's palate, many cans of milk would be drawn in more cleanly manner, and more thoroughly cooled in better-washed cans, than is at present the case.

If eggs can be produced at a feed cost of 8½ cents a dozen up to the first of July, as Professor Graham has figured out, and you can sell them for twenty cents a dozen, as the members of the egg circles in Peterborough are doing, that leaves a profit of nearly 150 per cent. I wish I knew some line that would pay me 150 per cent. profit. I'd work at it about two years.—[John A. Gunn.

What's the matter with going into the egg-producing business yourself, Mr. Gunn?

Some people are not content with a good thing when they get it. Because the buyers spent money freely in organizing the first few egg circles in Peterborough County, a few members got the idea their hen fruit was worth fabulous prices, and, notwithstanding that they were receiving a premium of five or six cents a dozen, tried to hold the buyers up for more. It was explained to them that they were already getting all their eggs

were worth, the only way to make them worth more being to keep on producing absolutely reliable eggs, till a strong, steady demand had developed for them. In the end, such a policy will pretty nearly enable a circle to dictate its own price, but co-operators should not attempt to realize on their reputation at full value before it is well established. There is an old proverb which says, "Much wants more, and loses all." We are pleased to add that the Peterborough members listened to reason, and concluded to stand by their circle.

Those who never eat any farm produce except what is produced on their own farms, can hardly realize what a large figure appearance cuts with fastidious customers. These rightly judge the cleanliness and sanitary conditions under which the goods were produced by its appearance on the market or store counter, and by the appearance of the person who brought it to town. Nothing pays better than tastefulness. It enables one to dictate his own price, especially when supplying well-to-do customers. Even such a little thing as grading eggs to color pays well, and stimulates the producer himself to take more of a pride in his product. In the co-operative egg circles in Peterborough, we are told, there is not one of the producers but voluntarily sorts his (or her) eggs according to color, merely to please their own eyes. In the end, this kind of thing will redound to their advantage. Nothing commands a more profitable price than good taste, particularly in the case of food products.

"If I had to dispense with most of the implements on my farm, one of the last I would part with is the manure-spreader," said an intelligent farmer to the editor of this journal not long ago. "Besides the saving of hard labor, the spreader applies the manure so fine and even that it does far more good. In fact, from experiments on my own farm, I believe it doubles the value of the manure. Let anyone who doubts this put three loads to the acre on his meadow, take off a crop of hay, and then plant to corn. It will make a marked difference in both crops."

We believe our friend is quite right in regarding the spreader as one of the last implements to be dispensed with, although he has probably exaggerated the benefit of mechanical distribution. It might in some cases double the first year's benefit by rendering the manure more promptly available. At all events, the spreader is a very valuable machine, and can be used for such purposes as applying lime and ashes and hauling roots.

How would you like your bread baked under a dripping cow just in out of the rain, with mud on her teats and urine spattering on the floor now and then, causing some drops to fall into the dough, not to mention flies, hairs, and occasional bits of manure? How long would you board where the bread was kneaded that way? Yet this bread would be wholesome and good, compared to the average pail of milk a few hours after it is drawn. The bacteria in the bread would be destroyed by baking, in the milk they flourish, finding it an ideal culture medium. Were it not that milk is essentially such a good and wholesome food, and so difficult to replace in the dietary, the conditions under which it is drawn and handled would be enough to make one swear-off ever tasting another drop, unless he knew how the cows were milked. Realizing the danger and the revolting nature of average dairy practice, can we not exercise such pains in milking as will at least exclude the "rough of the dirt"?

## The Cause of Strikes.

Upheavals like railroad strikes illustrate forcibly the chaotic condition into which proprietary industrialism has led us, or, rather, which it has aggravated, for the chaos antedates the industrial development. This chaos can never be resolved into cosmos by any amount of labor legislation, beneficial though this may be in some cases as a palliative. Any solution that is worth calling a solution must depend upon far more delicate adjustments and more nicely-automatic relationships than can ever be brought about by human law. The real trouble lies in human character, in its greed and comparative disregard of the interests of others, these faults being multiplied in their capacity for mischief by the corporation system, which establishes an almost purely impersonal relationship between employer and employed. Thus, two armies are pitted against each other, one seeking dividends and fat salaries for its head officers, the other seeking as high wages as can be secured, and, so that it may do this effectually, insisting upon minimum schedules of wages, which, on the other hand, the corporations usually exceed as little as possible with any of their men, lest high wages to some might lead to demands for a further augmentation of the average. Thus the tendency to a deadening level.

The position of the public in this contest is far from being that of a disinterested onlooker. Apart from its vital concern in the uninterrupted continuance of the services of these great enterprises, especially those such as railroads, which directly serve the people, the public is interested in the effect of wage increases in one line upon wages in other lines, and also in the effect of wage increases upon rates, improvement of service, opportunity for taxation, etc. How far an increase in wages necessarily increases cost of transportation, how far it may merely stimulate economy of labor, how far it may reduce dividends on watered stock, and how far it may tend to increase rates, are questions the layman has poor opportunity of deciding. This much is fairly certain, however, that wage increases to any class of workers do not proportionately increase the cost of the service, first, because wages are only part of the cost of operation; secondly, because wage increase is in every industry a direct stimulus to economize labor, making a given amount of it accomplish more than when it was less highly valued.

All this does not explain how the present chaotic conditions are to be improved. Socialists would say socialize all means of production, but this, while it might be helpful in some instances, will not produce a laborer's heaven unless human character is radically changed at the same time. Even public departments have had strikes, as witness the strike of the postmen and telegraphers in France, which nearly led to civil war. Some might say co-operate, letting employees have a voice in the management, and a share in the profits; but experience has repeatedly proven this a failure, when attempted on any elaborate plan, the failure being more largely due, perhaps, to greed, jealousy, suspicion, and lack of business training and judgment of the workers, than to faults of the dominant element.

The real, radical, fundamental need is for a vital religion that will get at people's hearts, regulate their characters, and remodel human nature.

## THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE  
DOMINION.

PUBLISHED WEEKLY BY  
THE WILLIAM WELD COMPANY (LIMITED)

JOHN WELD, MANAGER

AGENTS FOR THE FARMER'S ADVOCATE AND HOME JOURNAL,  
WINNIPEG, MAN.

### 1. THE FARMER'S ADVOCATE AND HOME MAGAZINE is published every Thursday.

It is impartial and independent of all cliques or parties, handsomely illustrated with original engravings, and furnishes the most practical, reliable and profitable information for farmers, dairymen, gardeners, stockmen and home-makers, of any publication in Canada.

### 2. TERMS OF SUBSCRIPTION.—In Canada, England, Ireland, Scotland, Newfoundland and New Zealand, \$1.50 per year, in advance; \$2.00 per year when not paid in advance. United States, \$2.50 per year; all other countries 12s. in advance.

### 3. ADVERTISING RATES.—Single insertion, 25 cents per line, agate. Contract rates furnished on application.

### 4. THE FARMER'S ADVOCATE is sent to subscribers until an explicit order is received for its discontinuance. All payments of arrearsages must be made as required by law.

### 5. THE LAW IS, that all subscribers to newspapers are held responsible until all arrearsages are paid and their paper ordered to be discontinued.

### 6. REMITTANCES should be made direct to us, either by Money Order or Registered Letter, which will be at our risk. When made otherwise we will not be responsible.

### 7. THE DATE ON YOUR LABEL shows to what time your subscription is paid.

### 8. ANONYMOUS communications will receive no attention. In every case the FULL NAME and POST-OFFICE ADDRESS MUST BE GIVEN.

### 9. WHEN A REPLY BY MAIL IS REQUIRED to Urgent Veterinary or Legal Enquiries, \$1 must be enclosed.

### 10. LETTERS intended for publication should be written on one side of the paper only.

### 11. CHANGE OF ADDRESS.—Subscribers when ordering a change of address should give the old as well as the new P. O. address.

### 12. WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles. For such as we consider valuable we will pay ten cents per inch printed matter. Criticisms of Articles, Suggestions How to Improve THE FARMER'S ADVOCATE AND HOME MAGAZINE, Descriptions of New Grains, Roots or Vegetables not generally known, Particulars of Experiments Tried, or Improved Methods of Cultivation, are each and all welcome. Contributions sent us must not be furnished after they have appeared in our columns. Rejected matter will be returned on receipt of postage.

### 13. ALL COMMUNICATIONS in reference to any matter connected with this paper should be addressed as below, and not to any individual connected with the paper.

Address—THE FARMER'S ADVOCATE, or  
THE WILLIAM WELD COMPANY (LIMITED),  
LONDON, CANADA.

### Enterprise and Favoritism.

"In one of his (Mr. Biggar's) pamphlets, issued in the interests of the trade, he pointed out disastrous conditions existing in English boot-and-shoe factories some years ago, when the keen competition of American makers, with their much-improved machinery-made footwear, led to the closing up of many English works. But mark the results, as told by Mr. Biggar. The Englishmen visited America, studied out the whys of their inability to compete, purchased proper machines, set their wits to work, and opened out their factories, to remain open and flourishing ever since."

This paragraph, quoted from Mr. Campbell's article, headed "Dutiable Wool," illustrates one of the strongest free-trade arguments ever penned. One of the worst effects of favoritism to a person, an industry, or a class is that it undermines self-reliance. When difficulties are encountered, the first impulse is liable to be not to see how one can overcome them by his own efforts, but to see what he can get the Government to do for him. Hence the complaint set up whenever an enterprising foreign competitor offers consumers something they prefer. And the more the Government helps, the longer the favoritism continues, the less self-reliant the beneficiary becomes. Competition is still in a very real sense the life of trade. It matters little whether the competition is domestic or foreign, so long as it is vigorous and free. Brain-rust, lethargy, adherence to antiquated methods, and general indolence and helplessness commonly characterize enterprises protected from effective competition. Business-like people progress when it has to progress in order to "keep its head above water." When the manager does not have to exercise his wits, the business almost invariably settles into a dog trot, and then to a slow walk, till it becomes a mere mechanical operation, a barracks upon the coast.

There is a lesson in this competition, must be recognized, and that is, that even though temporary protection is given, it only works by the stimulus which such industry upon a business leaves its consumers reap the benefit of it, and the industry in

stead of constituting a burden upon the community, becomes a valuable national asset.

Or if it cannot meet the competition, it dies, as it usually ought to do, and the capital and labor employed in it are diverted to some line where they can be more advantageously employed.

There are, of course, many other factors bearing on this complex question of free trade versus protection. We cannot discuss the whole subject in a column, but the above phase of it should command more attention than it generally receives.

### Elements of Success in Fairs.

A show, whether of Provincial or district proportions, is complex in its composition; its constituency is heterogeneous, making many and diverse demands. Many who attend come only for the races; some would think an exhibition scarce a success without a balloon ascension and a score of like attractions; others would be unsatisfied if there were no side-shows or fakirs. There are a goodly number of attendants, whose number is rapidly increasing each year, who come not so much to laugh and be laughed at as to derive some particular knowledge while at the show. These are to be found studying the rings of live stock, the machinery, the fruits, the grains, the seeds—everything that is educative. All these various types, together with the manufacturers, the advertising agents and the exhibitors, constitute the basis upon which the successful show must be built.

To be successful a fair must pay, not for this year alone, but for a series of many successive years. Probably every essential of a successful fair is implied in that one statement. To pay it must attract the people, must therefore serve its constituency, and so be a true factor in the upbuilding of its community. The fair must be centrally and conveniently located. The management must understand its people, not simply to cater to them, but rather to know wherein they need upbuilding. The directors must be capable of directing that educative policy of their fair. This does not mean to entirely abolish the amusing features; for to many pleasure and business are at this time combined, and many attractions and amusements are instructive. But it does mean the discriminative selection of such features and the abandonment of that policy which admits every applicant for privileges, providing he pays his license fee. Amusements and attractions may and should be clean, wholesome and educative. If they are not, they make for the ultimate failure of that show.

Further, that a fair pays there must be a fair, not the appearance of a few animals or implements in the rings simply to claim the prize money, without merit or competitors. This large competition is obtained by a liberal prize list, which carries numerous prizes. If six prizes instead of three are offered, an exhibitor's chances of winning are doubled; this will induce many more competitors to appear, which in turn interests very many more people, thus making a greater attendance. This influence is vast and cumulative. If attractions are necessary, and perhaps they are many times more so are exhibits, and they are gotten like attractions, by paying for them.

Next in importance to a full exhibit is a competent judiciary. Local talent usually receives small thanks for services faithfully rendered, good judges may exist locally, but it is preferable not to employ them. Outside talent is almost everywhere so impartial and usually satisfactory. But it must be capable, otherwise much of the advantage sought is perverted.

With a central location, a direct communication, clean attractions, a full competition, and able honorable judges, and fair work, a successful event should be fairly assured.

### Something Being Done.

Few country people live up to their privileges. Still fewer make an honest effort to make the best of their surroundings. Loss of every sort is the inevitable result of this unhappy combination of lack of appreciation and inaction.

To be specific, it is often claimed that country life, as compared with city life, is dull, uninteresting, and conservative to the point of being unprogressive. Now, it is undoubtedly true that the grim necessity that drives the city dweller relieves his days of monotony. To be in the lead in church or business, or social life, in city or town, renders it essential for one to devise some new thing almost every day. The aggregate efforts of those who in the city are really making progress presents an aspect of life that is anything but dead-level in appearance or in reality.

But, on the other hand, if country people find country life dull, the fault is in themselves, rather than in the country. To the country man whose faculties are alert to what is going on around him, there can be no dullness. At the same time, when we say this, we must admit that many country people seem to have allowed themselves to lose their powers of noting, appreciating, and finding delight in the treasure-house of marvels and delights in which our lot is cast. Our chief interest in soil and plant and animal is the commercial one. Even in cases in which some housewife finds pleasure in the appealing tenderness of flowers, her husband is too likely to grumble about all effort expended on their care as "not paying." Birds are sorely begrudged their titance of fruit, while ornamental trees or shrubs or flowers are regarded by some as simply hindrances that must be removed as speedily as possible.

Now, while it is a fact that Canadian farmers must bend, for many a day to come, a great part of their energies to money-making, they will be unworthy of their inheritance, and they will in the end prove unequal to their opportunities, even in a strictly commercial sense of the word, if they make money-getting the end-all and the be-all of their existence. Only that life may be regarded as complete which takes into account all phases of the human spirit; and only the man or woman who tries to attain this completeness of life and activity may hope for happiness.

That our country people are awakening to the value of a richer life, is evidenced by the increased interest that is being taken in our schools in elementary agriculture, the object of which is familiarizing the children with the laws that govern the warm, living realities around them. A second proof of this awakening may be cited in the work done by one of our young people's organizations. These young people have arranged for a series of nature-study meetings, at which such subjects as "Plant Life," "Bird Life," "Weather," "Bacteria," etc., are discussed. It is not to be expected that these young people should handle their subjects with the precision of experts, though the best leaders procurable are being secured to suggest and to lead in the discussions. Nor will the amount of knowledge acquired at these meetings be a matter of first importance. But what cannot help proving valuable will be the fact that those taking an interest in these studies will have their eyes open a little wider upon the great, interesting world they live in. All around us there is a freshness and loveliness and vigor of life with which we are familiar in only the faintest and most external manner, to our infinite loss in solid pleasure. The only way to correct this mistake and to recover this loss is for us to do as these young people are doing—to study under the best scientific direction available, to know as fully as we can the objects with which we are at present only partially familiar. By so doing, we will make the discovery that even the meanest flower will stir our natures to depths of thought, and afford us a pleasure to be had in no other way.

Already two of these topics have been discussed. To the amazement and delight of those who had the work in hand, "Bacteria" proved to be a subject of fascinating interest. Scarcely any realized the work done by these wonderful little organisms in promoting plant and animal life. In fact, it was a discovery to most to learn that not a leaf or an animal or a man returns to his kindred dust in the ordinary process of dissolution without the agency of these wonderful beings. The discovery of these creatures revolutionized surgery and sanitation. A proper understanding of their varied forms and activities bids fair to revolutionize farming. All this, this group of nature study students discovered with all the charm of a new world.

Very little has yet been accomplished, but it is to be hoped that to rouse interest, by bringing to our country homes some of the fruits of scientific research, and by encouraging all to study, to observe, and to adapt the scientific method to their life and labor that has been so long neglected in other departments.

Done.

their privileges. to make the best every sort is the combination of

ed that country dull, uninteresting of being unproductive true that the dweller relieves in the lead in in city or town, advise some new aggregate efforts ly making prog-

is anything but lity.

ny people find themselves, rather try man whose ing on around

the same time; hat many coun- themselves to ating, and find-

of marvels and Our chief inal is the com- ch some house- tenderness of

grumble about "not paying," tance of fruit, flowers are re- s that must be

adian farmers e, a great part they will be un- they will in the unities, even in

word, if they d the be-all of ay be regarded at all phases of

an or woman ess of life and

akening to the y the increased ur schools in of which is laws that gov- and them. A

ay be cited in g people's or- have arranged ngs, at which "Bird Life,"

discussed. It young people he precision of curable are and in the dis-

knowledge ac- or of first im- proving valu- ing an interest e open a little

orld they live less and loveli- are familiar al manner, to

The only way er this loss is are doing—to ion available, ts with which

illiar. By so that even the to depths of he had in no

ve been dis- light of those a "proved to

Sincerely any nderful little imal life. In

earn that not ns to his kin- of dissolution al heirs. The tionized sur- understanding of

fair to revop- up of nature the charm of

mplished, but rest, by bring- the fruits of encouraging all apt the sci- entist that has

departments O. C.

# HORSES.

## Joint Ill and Pervious Urachus.

I wish to take exception to the advice given in "The Farmer's Advocate" for the treatment of colts' navels. You advise the tying of the cord, to be followed by the application of a ten-per-cent. solution of formalin three times daily. I followed these instructions, with fatal results in a valuable colt. Below I give a history of the case, which would seem to prove that your advice is misleading, and calculated to do invaluable harm and cause heavy loss to the public:

In anticipation of the birth of foal, I had bottle of a ten-per-cent. solution of formalin ready, and had cord and scissors in it. When colt was born, I tied the navel three inches below the abdomen, and cut it below the string, dressed the cord with the solution, and twice daily afterwards. The colt bled so much that I was forced to put on another string. Then he swelled greatly at the navel. In about a week it broke, and a milky, watery fluid escaped, and the colt had a strong desire to urinate. I again used the formalin, got it stopped, but it swelled again, and in a few days broke again. I again used the formalin, and sent for my veterinarian. It was again healed when he arrived, and he advised the application of poultices. I did this for 24 hours, when it broke again, and the watery fluid escaped. He leaked badly from the navel, and I again called my veterinarian. The colt was now three and a half weeks old, and the veterinarian could plainly see that he had joint-ill, as he walked stiffly. He treated for joint-ill, and the colt died in a week. A post mortem revealed the hips and navel full of corruption, all other organs healthy. I might say that, before death, the colt's legs and joints swelled badly, and he could not rise without assistance, and water ran freely from the navel.

My veterinarian has this season treated 60 cases of joint-ill, and when he is called in time he never loses a case. He has lost four this season out of the 60, mine being one of them, and says 80 per cent. of these were treated at birth as mine was. He says that nature should be allowed to act at birth, that in no case should the cord be tied that the blood should escape. He asks, "What becomes of the blood you tie in?" In answer, he says: "One of these things, it either goes back to the bladder, becomes absorbed, or forms an abscess."

Now, sir, I would like to see this discussed in "The Farmer's Advocate." I might add that I have followed the treatment you recommend since it first appeared in "The Farmer's Advocate."

S. C.

The above case was one in which there was a complication of diseases, viz., pervious urachus and joint-ill. Two or three years ago, or longer, an article of mine on each of these diseases was published in "The Farmer's Advocate." They are distinctly different conditions, but occasionally co-exist. In this case, the former trouble was present from birth, but the latter developed when the colt was over three weeks old.

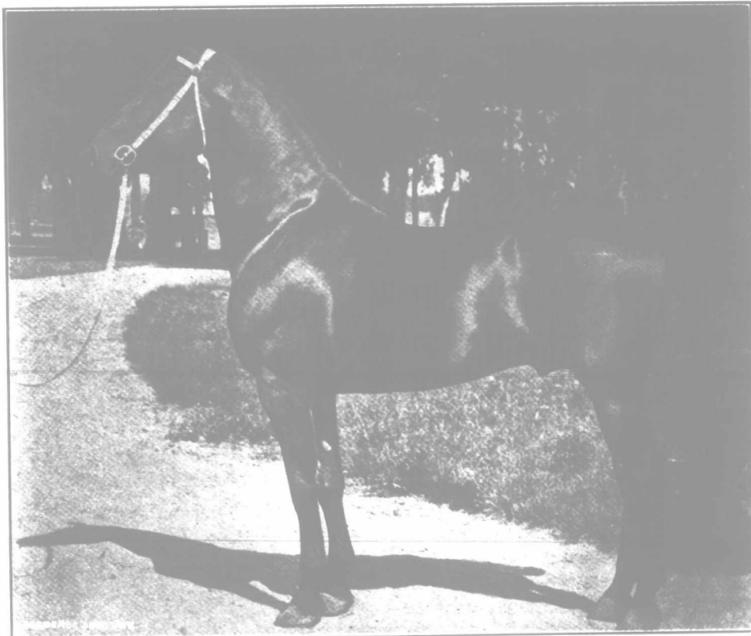
I am forced to disagree with your veterinarian when he states that under no condition should the umbilical cord of a colt be tied. Your experience in this—your own case—should prove to you that he is mistaken. You state that even after you tied the cord the colt bled so freely that you had to put on another ligature. In many cases the cord is severed during birth, or bitten off by the dam shortly afterwards, and in such cases it is seldom that bleeding takes place. We like it better when this occurs, but when the cord is not severed, but the afterbirth still attached to the foal by means of the cord, it is necessary to sever it, and experience has taught us that, when cut, and not ligatured, there will be an escape of a considerable quantity of blood—enough to weaken the colt and, in some cases sufficient to cause death. If the cord were severed by a scraping motion of a dull knife, or with an oesaseur or an emasculator, bleeding would not be so likely to occur. But the farmer does not know how to sever it, or has not the proper instruments, hence he is forced to tie it, and I must say that in a practice of 28 years I have not known a case that I considered resulted unfavorably, from the fact that the cord had been properly tied. The blood that escapes passes from the main artery of the posterior division of the body of the colt by two fetal vessels called the umbilical arteries. As soon as the foal is born, the function of these vessels ceases, and they become obliterated, and the blood that may still remain in them becomes absorbed.

Now, to the question, "What becomes of this blood?" and ask, "Does it return to the bladder?" Now, sir, it has never been in the bladder, and it got there, as the vessels, that

contain it have no connection with the bladder. In some cases an abscess is formed, but I am of the opinion that this is not due to the blood, but to infective matter that has been introduced in some way, probably by the cord that has been used to tie the navel cord, it not having been properly disinfected.

I will now mention another fetal organ that caused the primary trouble in your colt. During fetal life a small quantity of urine is formed. This passes to the bladder, from the lower and anterior portion of which a tube called the urachus passes to the navel opening, and conveys the urine out of the colt's body to the fetal membranes. At birth, this tube, under normal conditions, becomes obliterated, and the urine escapes from the bladder by the urethra. In some cases, the reasons of causes for which cannot be given, this tube does not become obliterated; it remains pervious, and the urine, in greater or less quantities, continues to escape through the navel opening. This condition is called "pervious urachus." This was the condition in your colt. In some cases there is a false membrane in the urethra which prevents the escape of urine through the normal channel, and in such cases a catheter must be passed to break this membrane down. You do not state whether or not your colt voided urine normally or not, hence I cannot say whether or not the normal passage was pervious. When pervious urachus is present, treatment consists in ligaturing the cord with a suture that has been made thoroughly antiseptic, and then dressing the parts frequently with an ordinary antiseptic, as a 5-per-cent. solution of carbolic acid.

As regards joint or navel-ill, modern science has demonstrated beyond all doubt that it is caused by a specific germ that exists in stables, earth, etc., and gains the circulation through the



What Breed is this Horse?

(See breed-study contest.)

navel opening during or after birth. This germ may be present on the hips, thighs or tail of the dam, and enter the opening during birth, hence, often preventive measures prove abortive. Treatment of this disease has, to most practitioners, been very unsatisfactory, hence preventive measures are considered best. These consist in applying to the navel, as soon as possible after birth, and several times daily afterwards until it heals, a good antiseptic. A ten-per-cent. solution of formalin in water has given good results to most practitioners who have used it. I do not use it, but would have no hesitation in doing so, and do not consider it "too strong." I usually use a solution of corrosive sublimate, 20 grains to a pint of water, but a ten-per-cent. solution of carbolic acid, creolin, Zenoleum, etc., will probably give as good results. There is no doubt that this disease developed in your colt as the result of the entrance of the germs after he was two or three weeks old, and the reason the navel opening had not healed before this was on account of pervious urachus. Your veterinarian certainly has had a great number of cases of joint-ill this season, and his success in treatment has been phenomenal. As the disease usually proves fatal under the treatment of most practitioners, the treatment adopted by this gentleman would be instructive and interesting reading to the veterinarians in Canada. At the same time, we are of the opinion that possibly a large number of the cases were not really joint-ill, as, certainly, in your case, a correct diagnosis was not made, but a confusion of the two conditions discussed exists.

—WHIP.

## Another Breed-study Contest.

The interest aroused by the first breed-study contest encourages us to continue the feature by publishing this week the picture of a celebrated horse, whose breed our readers are invited to guess, giving reasons for their opinions. As before, a prize of a one-dollar book is offered for the first and best correct answer given, main stress being placed upon the statement of reasons. We believe that, in stimulating a discriminating study of animal form and characteristics, these breed contests may do much good, and, apart altogether from the question of prize-money, anyone who takes part will be greatly benefited, whether he wins or not. Address answers, "Breed-study Contest," "Farmer's Advocate," London, Ont. Do not delay sending replies. In a close decision, priority of receipt may turn the scale. Competition closes August 6th.

## Favors Raising Fall Colts.

In a speech before the Minnesota Live-stock Breeders' Association, George F. Lee said the raising of fall colts ought to receive more attention among farmers than at present, and especially so where several colts are raised each year. Many mares, he said, are worked but little during the winter months, and could better raise a colt than in summer, when in the harness much of the time. No extra warm barn, nor no more room, is needed than for the spring colt. The little fellow will get a surprisingly warm coat of hair, and ought to be out in the yard every day when other horses can be out.

It is best to have the fall colts come between October 15th and December 1st; getting them earlier brings it into the fall work too much, and getting them later makes it rather cold for the little fellows before they get their coat of hair.

Wean the colts about March 1st, which gives some time to get the mare in good shape for spring work. The colt by this time will eat oats, and when grass comes, let them out, but teach them to come to the barn every night, so that they can be fed twice a day. It will not do to try to carry a fall colt through the first summer on grass alone. Such a colt, well started, and kept growing right along, can be broken to work and earn its living after two and one-half years old, which is half a year ahead of the spring colt, instead of a year behind, as some claim.

Another point is that a mare in foal, handled by a considerate driver, can better stand the work in summer than one nursing a colt and doing the same amount of work.

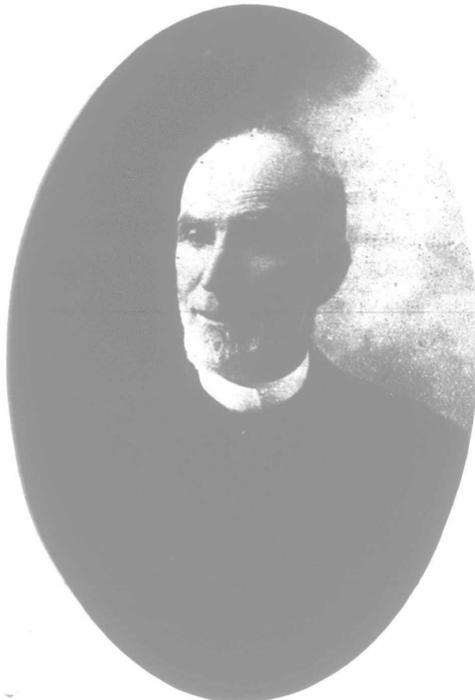
Some difficulty may be experienced in getting the mares to breed late enough in the fall, especially if they are thin in flesh, but when once started, there is no trouble after that.

## Foul Feet.

In the hot summer weather, when horses are being fed upon fresh green hay, and kept in the stable much of the time when not at work, thrush or foul in the feet very soon develops. The fresh green manure becomes tightly packed in the clefts of the feet, remaining there, and being damp, in this hot weather very soon becomes offensive and injurious. The stable should be cleaned out, without fail, every day, and fresh, dry bedding placed in the stalls. The feet of the horses need to be examined frequently, and to be thoroughly cleaned. If any foulness is developing, after cleaning the feet it is well to soak them in a disinfecting solution, thus killing all germs. After this, powdered boracic acid, sprinkled in the deeper crevices of the feet, is beneficial.

Thrush and foul feet are easily prevented by pursuing clean, sanitary methods about the stables, but are quite difficult to overcome when well established.

## LIVE STOCK.



John Watt.

## Honor Roll of Shorthorns—VI.

By J. C. Snell.

In December, 1887, was imported by William Miller for Luther Adams, of Iowa, amongst others, the Cruickshank-bred bull, Indian Chief =11108=, then a yearling, red, sired by Cumberland, dam a Sittyton Victoria, and purchased at an auction sale in Chicago in May, 1888, by Arthur Johnston, of Greenwood, Ont. While he did not figure in the honor roll of prizewinners, never having been shown, Indian Chief was the sire of more first-prize and champion-winning bulls at leading shows than any that had preceded him in Canada, with the exception of Bampton Hero. While not a large animal, he had good character, type and quality, and was backed by the best of breeding, which told splendidly in his progeny. Perhaps the best of his sons was Nonpareil Chief =13669=, a massive and well-fleshed roan bull, which, as a yearling, was champion at Toronto in 1891, shown by R. & S. Nicholson, Sylvan, and in strong competition at the World's Fair, in Chicago, in 1893, in the hands of Col. T. S. Moberley, of Kentucky, he stood third in the aged class, being beaten only by Young Abbotsburn, a Canadian-bred bull, the grand champion male of the beef breeds, also shown by Col. Moberley, and by Imp. Gay Monarch, shown by J. G. Robbins & Sons, of Indiana. Nonpareil Chief was one of the very best bulls of the breed ever produced in Canada.

At the risk of going ahead of the order of the records, it is perhaps as well to deal with Young Abbotsburn 6236 here, though he was never shown at a prominent show in Canada. He was a light roan bull, born in March, 1885, bred by John & Wm. Watt, of Salem, Ont., got by Imp. Abbotsburn, bred by Amos Cruickshank, dam Village Blossom, of the Sittyton family of that name. He was sold for \$200 when seven months old to Alex. Norrie, of Bruce County, a comparatively obscure breeder, but a good judge and feeder. Hearing favorable reports of the bull, the Messrs. Watt attended a sale held by Norrie, and finding Young Abbotsburn, at five years old, far above their expectations, weighing nearly 2,600 pounds, and full of character and quality, he was purchased by them at a bargain price, and, in 1890, when times were hard, he was sold to Col. Moberley for \$125, in whose hands he made a great prize-winning record, including his signal victory at the Columbian Exposition, the greatest event of its kind in America up to that date. Massive, wealthy, fleshed, quiet in disposition, and commanding in appearance, he was a prince among his peers, a distinct credit to his breeders, and a splendid advertisement for Canadian Shorthorns. His weight, when shown at Chicago, in his eight-year-old term, was reported as over 2,800 pounds, but he walked with a swing and a stride which gave no indication of his being overdone. It was a striking feature of the parade to see this behemoth

led into the arena by the seven-year-old son of the owner. And a sad event which occurred not long after the show was the death by drowning of the courteous and kindly Col. Moberley, while attempting the rescue of his young son from the same calamity. I always think of Young Abbotsburn as being nearer than any other to the type of the best Shorthorn bull I ever saw, namely, Mr. Duthie's Field Marshal, seen at the Royal Farms at Windsor in 1889. His son, Mario, was first at the Royal that year, and should have been champion, but for one of the worst pieces of judging I have seen, Lord Polwarth's rough two-year-old, Ironclad, being awarded that honor over Mario, and the Queen's grand yearling, New Year's Gift. But, in my humble opinion, and that of others who saw Field Marshal in the pasture with the cows, he could easily have beaten them all in his everyday condition, without an special preparation. The accompanying portrait of Young Abbotsburn is copied by courtesy of the author of the "History of Shorthorns," by A. H. Sanders.

The champion bull at Toronto in 1889 was Stanley =7949=, a rich roan, mellow-fleshed son of Challenge, born in 1886, bred by Jos. Redmond, of Peterboro, Ont., in whose herd he did excellent service, and he was purchased at a bargain price in the financial depression of that period by J. & W. Russell, of Richmond Hill, in whose hands he proved a priceless treasure, winning twice the championship at Toronto, and proving an uncommonly potent sire, begetting, among others, such notable champion bulls as Tonsman and Lord Stanley, the junior champion at the World's Fair at Chicago, both born in the autumn of the same year.

In 1896 the champion bull at Toronto was Master Ingram =8329=, shown by Bow Park Farm, a roan three-year-old son of Sir Arthur Ingram (purchased from Wm. Linton, of Aurora, Ont.), and out of the fine show cow, Haverling Nonpareil 2nd (imp.). He was a bull of great substance and grand quality, the result of Booth blood crossed on Bates.

At Toronto, in 1891, the contest in the aged bull class lay between the eight-year-old roan, Challenge, by Bampton Hero, and Challenge's five-year-old roan son, Stanley, the former shown



Young Abbotsburn.

Champion over all beef breeds, Columbian Exhibition, Chicago, 1893.

by J. & W. Watt, and the latter by J. & W. Russell, the judges being W. H. Gibson, Jas. I. Davidson, Jr., and the writer. It was a close match, but the son was finally given the premier place, the third award going to Prince Albert, another son of Bampton Hero, and an extra-good one, shown by Harry Smith, of Hay. Bulls were strong at Toronto that year, the first-prize yearling, and the male champion of the show, being the splendid roan son of Imp. Indian Chief, Nonpareil Chief, bred by Arthur Johnston, and shown by R. & S. Nicholson, of Sylvan, the reserve being Stanley. The sweepstakes female at the same show was Mildred 3rd, a rich roan, four-year-old daughter of Challenge, carrying a milk vessel that would have done honor to a dairy cow of any breed. An extraordinarily good two-year-old heifer, named Red Rose of Strathmore, bred by John Miller & Sons, sired by Imp. Vice Consul 1132, and shown by Robert Davies, was first in her class and reserve champion. By the way, Vice Consul was a red bull, bred by Amos Cruickshank, and a right good one, imported by John Miller, sired by Dunblane, and out of a Victoria cow. He was a prominent prizewinner in the early eighties.

In 1892 the male championship at Toronto again went to a roan son of Indian Chief, bred by Arthur Johnston, named Greenhouse Chief 11723, and shown by W. B. Cockburn. He was a bull of fine character, and a superior sire, as his progeny, shown at the Columbian, amply attested. A yearling bull of fine quality, and one which proved a capital breeder, shown by S. J. Pearson & Son, of Meadowvale, was Mina Lad, a rich roan son of Stanley, the twice-crowned king of former years at Toronto, and out of the Kinellar bred cow, Mina Lass. The first-prize bull calf was J. & W. Russell's white Lord Stanley, by Stanley, by Challenge. This calf, at the Ottawa show, the same year, was awarded the sweepstakes

prize as best bull any age, over the Toronto champion. The writer, being the single judge, was the subject of some criticism for placing, for the first time in a prominent show in Canada, a calf in that position, but the record of Lord Stanley as junior champion at the World's Fair at Chicago, and champion at Toronto later on, fully justified the pre-eminence given him in his babyhood. The sweepstakes female at this show was Russell's first-prize roan yearling heifer, Centennial Isabella 25th, a daughter of Stanley, and, like nearly all his get, an uncommonly good one. The first-prize cow at this show was Harry Smith's beautiful white Village Lily, a daughter of Imp. Village Blossom, the dam of the World's Fair champion, Young Abbotsburn.

(To be continued.)

## Developed by Responsibility.

That the boys of the country may grow to love its work, and enjoy the delights and opportunities of a career on the farm, it is necessary that they be given, as boys, a close and really vital connection with the operations that form the daily routine of the farm. Placing responsibility upon the growing boy develops a respect for himself and a love for his work. He soon learns that he is not a machine to do routine work, and that farm life is not a drudgery, but a complexity of science and art inviting to the talents of the ablest men. It would be well if every father living on a farm would follow the example of John Buchanan, of Kent Co., Ont., who has had his 13-year-old son George feeding for market a group of 3-year-old grade Shorthorn steers. Recently they were marketed at 10 cents per pound, averaging 1,446 pounds, and netting \$506.10. The son attended school and took care of the steers. That boy was doing good work night and morning before and after school. He was studying the problem of feeding beef cattle; undoubtedly, he learned much of the art, of its fascination, and had glimpses into its depths; he had a nice chance to observe individuality in steers and to discriminate between the good and the best. He was doing responsible work; there was something at stake; he counted for something of real value. At the same time, he was doing a delightful task, and, best of all, when the work was completed, there was the satisfaction of having done it successfully. It is to be hoped he shared in the profits. Thus are good boys developed into good men, without being sacrificed by that blind, narrow custom which makes a boy only a working machine, forgetting that he is also a player, and a learner, seeking to live the fullest life, to know much, and to enjoy all.

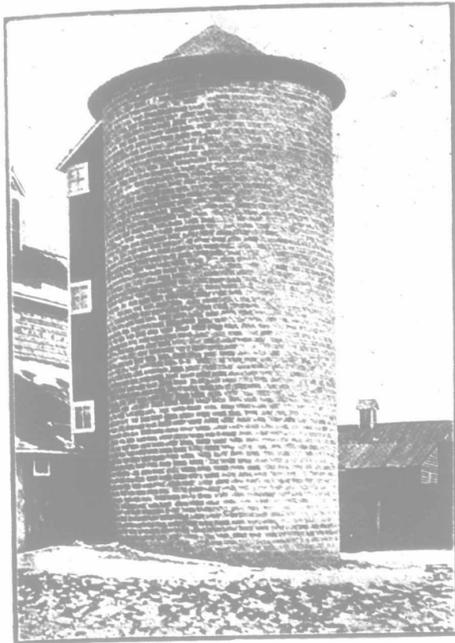
## Gestation in Sows.

Whether or not a sow is safely in pig will be known usually about 29 or 31 days after coupling, so that the probable time of farrowing may be known. The period of gestation is about 112 days from the date of service. Young sows are likely to carry their first litters for a slightly shorter period, not infrequently farrowing in 106 or 108 days, while old sows may take a longer time, extending to possibly 115 days. Instances are exceptional when any variation either way exceeds a week from the 112th day. — From Coburn's "Swine in America."



Arthur Johnston.

THE FARM.



An Iowa Silo.

The Iowa Silo.

For several years, Professors Davidson and King, of the Engineering staff of the Iowa Agricultural Experiment Station, have been making a very thorough study of silo construction. From the various types in use, and from new ideas of their own, they have perfected a type of silo which, although not entirely new, yet has many distinctive features. They have called it the Iowa silo. Silos of their construction have been in use now for three years, which gives a basis whereby their utility may be gauged. Very full details are given regarding the structure of this silo in Bulletin 117, Iowa Experiment Station, Ames, Iowa. It is built of hard-burned, hollow clay building blocks (vitrified hollow bricks), which the authors prefer to be 4 x 8 x 12 inches, having the appearance in cross-section of two 4 x 4 x 12's placed together. The brick may be either straight in their longest dimension, or curved; if curved, they give a smoother finish both to the interior and exterior of the wall. The four-inch wall is abundantly strong. The curving of the brick is an easy matter, and costs little, according to the authors. The mortar used is composed of cement, lime and sand, mixed about 3-1-6. The reinforcement recommended is No. 3 black, high-carbon wire, and is placed in every mortar joint at the bottom of the wall, where 4-inch blocks are used, and doubled in every lower joint where 8-inch blocks are used. As the top of the building is approached, No. 6 or No. 9 wire may be used.

The roof is made of concrete laid on expanded metal. It has a wide ledge, which serves as a platform whenever access to the roof is required. The silo may have either individual or continuous doors. The continuous doorway has cross-ties 12 inches apart. The doorways are of reinforced concrete, while the doors themselves are of wood. If properly constructed, the authors of the bulletin believe that a silo of this type will last several generations. It is fireproof, is very strong, is convenient, is economic of silage, is attractive, takes little repairing, and is quite frost-resistant. However, it is not as frost-proof as the double-wall concrete silo or cement-block silo. [These two latter types of silo walls, having less material joining their inside and outside surfaces, and a less restricted air circulation, are less subject to the effects of frost.] Relatively, it is a somewhat expensive silo, but when its length of life is considered, it is not so expensive. In Iowa, a 16 ft. diameter, 37 feet high silo cost \$282; another, 16 by 35, cost \$403, according to the bill of materials and labor, while the farmer stated that it cost him, without the chute, about \$350. Compared to solid-concrete silos, this is somewhat expensive, though it will be more frost-proof.

The features of a concrete roof and of reinforced concrete door frames are especially worthy of the attention of silo-builders everywhere. The minute details of cost and construction given in the bulletin make it a valuable publication in the hands of farmers almost everywhere.

Fencing of the Wood-lot.

Editor "The Farmer's Advocate":

While there is nothing of which I am less desirous than useless controversy, judging from Mr. MacMillan's comment on my article in your June 16th issue, re "The Fencing of the Wood-lot," which he submits under the heading, "Systematic Farm Forestry Will Pay," in the issue of June 30th, I would offer a few practical points bearing on the question of profits to be derived, omitting all fine theory regarding general forestry.

While it pleases Mr. MacMillan to regard my reasoning as merely a few doubts or fears, quite ungrounded, and later erroneous, but which he will easily dispose of, we may infer that what he has offered is sound logic, and not to be disputed.

My being a practical farmer, and not a professional forester, perhaps accounts for the somewhat different view I endeavored to express, but I may say here that what reasoning I have brought forth was from practical observation and experience from a man on the ground, and since he prefers to look at the matter from the standpoint of profits that accrue to the farmer, I shall reason further along that line.

Let it be understood right here—and I think I made this point quite clear in my last article—that I am quite in line with those in favor of forest preservation of certain areas of forest growth existing to-day, and reforestation of certain other areas that have been bared of the original growth, but the question I attempted to present then, as now, is, "Should every area at present under trees be preserved as such?" In my former article, the point I wished to make was stated in these words, "Many areas at present, however, of the finest and most desirable soil for agricultural purposes, are barred from serving such a purpose owing to their being covered by a scattered, dying remnant of the primeval forest. Will it be to our best interest, and of those who follow, to fence these areas?" It is under these conditions that I would like the exponents of forest

land, I have as yet failed to see a promising growth, where sod had formed over the ground. This is not to be wondered at, when we consider that conditions affecting tree-growth are so different now and fifty or one hundred years ago. Just so with our field crops—where spring wheat used to be grown successfully, to-day it is not a paying crop. Lack of protection is one of the greatest handicaps, but Mr. MacMillan claims we should have an evergreen shelter-belt around the wood-lot. If this provision affords the needed shelter, it is an easy way of righting natural conditions, but it is surely to be deplored that the provision of same is so impractical. What would it avail, if grown—which would take twenty-five years, at least—in such a case as recently came to the writer's knowledge, happening just a few weeks ago, when four acres of wood-lot was demolished in about four minutes?

In nearly every instance where our best and highest-priced agricultural land of Old Ontario is claimed by such a forest growth as I have previously described, these areas are annually deteriorating in value; in fact, they cannot help but fail. Now, is this progressive agriculture? On the other hand, if these areas were under cultivation, and tilled intelligently, would they not be steadily improving in fertility and value, as well as the product of these areas, which would also increase steadily? The wood-lot can serve but one purpose—i. e., the production of fuel or timber; while, of a cultivated area, there is no limit to the uses it can be put to, or its produce may be of fruit, of field crops, or it may be specialized on with one particular crop, and still larger returns derived.

If farmers—who, in general, unfortunately, are not—were so positioned as to be able to play the part of national benefactors, by setting aside a part of their farms as a forest reserve, the reasoning for the taking up of forestry so generally might apply; but while it behooves the farmer to make the most out of all, as to-day, such areas must be put to more profitable use, while the forester's fond dreams remain in part unrealized.

While Mr. MacMillan's comment is headed "Systematic Farm Forestry Will Pay," we fail to note anything further along the line of profits to be gained until we reach his last sentence, when he concludes with the statement, "If farm wood-lots are managed on a business basis, they can be made return a good cash rental," which, however, he drops at this juncture, without outlining the business basis to be followed; but, this is about the way we would expect to be told how to farm the wood-lot profitably, under the conditions I have enumerated. I will again add the words I concluded my last article with: "Of course, I would most emphatically encourage the preservation and—where now bared of their original forests—the reforestation of all areas that will not produce farm crops profitably, but will carry a splendid forest growth; and there are many such areas. Where land is not adapted to other purposes, by all means get it under trees, and let them grow into what they will, and be given every advantage to assist in their growth."

Dundas Co., Ont. CLARK HAMILTON.

[Note.—Mr. MacMillan, having gone into this question of revenue and profit, in an article published in our issue of January 27th, 1910, probably considered it unnecessary to repeat his calculations and arguments. It is unfortunately true, as Mr. Hamilton says, that returns from forestry



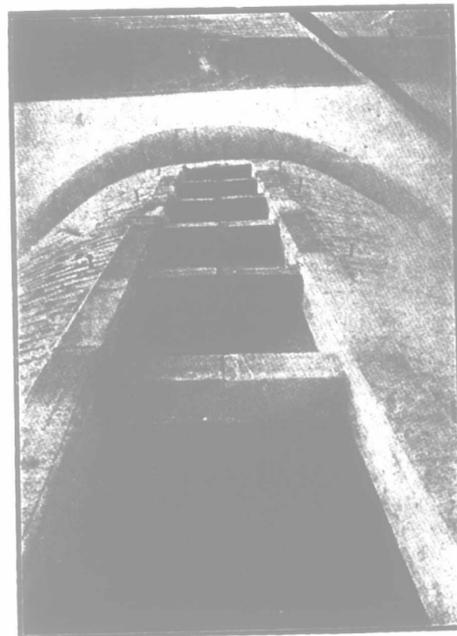
Roof of Iowa Silo.

Framework for structure of cement roof on Iowa silo; also shows the broad edges at eave.

preservation, under any and all conditions, to show us how profitable use is to be made of such areas as wood-lots. Is a young farmer who, perchance, is laboring under a heavy mortgage—or not, it does not matter—but at any rate is paying annual taxes, and maintaining fences on fifteen or twenty acres of the best of his farm under such a growth, while he needs the most his farm can produce, going to realize the most by setting out to preserve and renew this area as a wood-lot?

The first point emphasized is that the stock must be shut out, thereby cutting off what little use might be derived from the area from pasture; all profits or revenue must come from timber production. But what is this to consist of? The annual amount of dead wood to be cut out, or the pruning or thinning process of the undesirable or scrubby growth he refers to, would only make firewood of an inferior quality; and anyone who has had the least bit of experience in the placing of firewood on the market knows that this is just about the least productive of profit, over the expense of producing and preparing same, of any venture the farmer can undertake. Furthermore, anyone knows that, with the stand of live trees already very thin, to proceed to cut timber in the form of the best live trees, so as to derive a satisfactory annual revenue, means a depreciation of value at a much greater rate than the annual growth compensates or restores, for one hundred years would not include the lifetime of some of our most valuable timber trees, and to wait this long for another tree to grow in would be a rather slow-going business proposition. Does it look very feasible to the farmer who must make the most of his opportunities under existing conditions?

To return to this matter of natural renewal of these areas in the form of young trees, in nine cases out of ten it results in merely a scrubby undergrowth. If it were always satisfactory, there might be some hope; but, of the fenced wood-lots that have come under my observation, where the area in question was desirable agricul-



Doorway of Iowa Silo.

View looking upwards towards roof. Notice size of openings and cement frame for doors.

are slow. They are not, however, so meagre as might at first appear. Remember, it is the profit from working an acre that should be considered, not the gross return. On this basis, a well-managed farm wood-lot, so handled as to produce a fair proportion of merchantable timber, will, barring the somewhat rare chance of destruction by fire or storm, eventually make a very satisfactory showing, indeed. As to the possibility of the sodded wood-lots reproducing a vigorous growth of desirable saplings, we can only conclude that the lots which have come under Mr. Hamilton's notice were not properly managed, or else conditions in Eastern Ontario are radically different from those in the West. We have personally examined scores of most excellent wood-lots, which were practically restored after the sod had come in by the simple expedient of keeping out stock, supplemented by a very little inexpensive thinning. We have yet to hear of the first authenticated instance where this plan has failed of satisfactory results. Opinions differ, but, for our part, we would far rather leave a son a fine ten or fifteen-acre wood-lot than the cash that might be accumulated by working the extra land. The chances are he would be about as rich in property and very much richer in satisfaction and character. Of course, such wood-lot should be located, by preference, on the poor or broken land.—Editor.]

### Homemade Lightning Rods.

Editor "The Farmer's Advocate":

Would you kindly publish in your paper a more detailed account of the construction of lightning-rods, as to proper method of attaching to buildings, what is used for upright points, and how to support them; what protection is given chimneys on gable and cottage roofs? Also, do you consider the single heavy cable better than several small strands twisted? Where can we get the necessary supplies? D. I. J.

Probably the most satisfactory homemade lightning-rods are made by using nine strands of No. 9 galvanized-iron wire, twisted together. Find the total length of rod needed, running it to the grounds at both ends of the building, if the building is of considerable length. Also use the same material for uprights as for the running rod. In twisting the wires together, allow six inches of shrink to the hundred feet. Fasten one end of the wires to a stake driven into the ground and well braced. Hook the other end of the strands to the spokes of a wagon wheel close to the hub, taking care that they are of even length. Brace the wagon, elevate the axle, rotate, and very soon the strands will be properly twisted together. For uprights (which should be five feet high) use this same material, attaching them to the rod when it is in position along the peak, but before nailing it down. By cutting the uprights six and a half feet long, untwisting a foot and a half, and using it to fasten the upright to the main rod, the connection is quite easily made. The upper points of the wires in the uprights should be spread apart and filed to a point.

The main rod is usually fastened to the building solidly with stout staples, often having an inch layer of cork beneath it to avoid direct contact; two spikes may be driven in the form of an X to support rod at their crossing point.

The main rod should be grounded at least six feet deep at both ends of the barn.

The single heavy cable is not considered as desirable as the more numerous smaller ones. Telephone wire is more desirable than fence wire, since its galvanizing is more durable. The necessary supplies are obtainable at any general hardware store.

### Tiling Roads in Illinois.

An Illinois Experiment Station bulletin says that all roads, except those on pure sand, can be materially improved by tile drainage. This opinion seems to be concurred in by many Illinois farmers in localities where such tiling has been done, and it is the universal opinion of all those farmers who have had best success in draining their own land. The cost of tile drainage there is but about fifty cents a rod, or \$160 per mile, and the improvement is permanent, with little or no subsequent cost for maintenance. The benefit to roads is immediate and certain, and the soil is then in the best possible condition for a gravel or stone road. "Roads tiled without gravel are better than roads gravelled without tile," is the conclusion arrived at. This is just what "The Farmer's Advocate" has steadily maintained. There doubtless are exceptions to this rule, but as applying to the average rural road mileage, we believe it is strictly true, providing the tiled roads are also properly drained.

Having money in the opinion of the Minnesota Experiment Station, manure can be hauled and scattered over some portion of the farm every month of the year to good advantage. It is much better to leave it on the land than in the barnyard or in piles near the farm buildings. The Station has found the manure spreader a wonderful help in lightening the work of unloading and obtaining an even distribution over the soil.

### Stinkweed or Penny Cress.

WATCH OUT FOR IT.

Stinkweed, penny cress, or French weed, is an annual, or winter annual, propagated by seeds. It is described in "Farm Weeds" as having an "erect stem, simple or branching. Whole plant bright green, and quite smooth. Root leaves borne on footstalks; stem leaves spear-shaped, coarsely-toothed, clasping the stem with the arrow-shaped base. Flowers clear white,  $\frac{1}{4}$  of an inch across; at first in a small flat cluster at the top of the leafy stem. Pods flat,  $\frac{1}{4}$  of an inch across, containing from 8 to 16 seeds, on slender, upward-curved footstalks, pale green and winged, notched at the top. Just before the seeds ripen the pods turn a characteristic greenish orange shade, easily noticed when the weed is growing among crops."

Stinkweed is so called from its nauseous odor if bruised when green. It is a terrible pest in the Prairie Provinces, flourishing in greatest abundance in the rich lands of the Red River Valley. An eminent authority says: "Close attention should be given to any portion of a farm where stinkweed has been noticed, and careful, persistent work will be required to eradicate it; but it will pay well to do all other work and fight this weed when it is first noticed."



Field Penny Cress or Stinkweed.

A farmer in Middlesex Co., Ont., who had rented his farm for a year, noticed a few plants of stinkweed on his place when he returned to it, but, not knowing the weed, paid little attention to it. Later, he learned its name and character, but in the meantime it has multiplied, until it is quite the worst weed he has to deal with. Unlike most annuals, it can be seen on this farm growing among the grass in the fence corners, as well as in the crop.

The other day, a single plant of stinkweed was found on a place in the suburbs of London, Ont. The seed is believed to have come in Western oats.

The cut which we publish, with the description quoted, will enable readers to identify this disgusting and dangerous weed. With the importation of Western grain, many weeds before unseen are certain to be introduced on farms in the Eastern Provinces. Stinkweed is one of the very worst.

### The Army Worm.

Alarming reports have reached the Minnesota Experiment Station of the destruction of entire fields of timothy by caterpillars. The State Entomologist and his assistants have found these caterpillars to be army worms, and farmers have been advised to spray timothy heads or other crops being injured, close to the worm, or at edge of field across the line of march, and between the caterpillars and the crop which they threaten. Farmers are, therefore, resorting to a spray of arsenate of lead, where they can get it, or Paris green, where it is possible to plow one or two furrows across their line of march, and between them and the crop which they threaten to attack. It is a good plan to do so, moving the stems side of the furrow toward the above-mentioned crop. When they gather in these furrows, they can be killed with kerosene.

### Parentage of Wireworm.

Editor "The Farmer's Advocate":

After having read your article on wireworms and white grubs, in June 9th issue, I give you the following correction for what you think it is worth: There is a completely erroneous opinion as to the parentage of the wireworm. Click-beetles are no more their parents than you or I are. If you do not believe this, go through an old sod field on a clay farm in any part infested with wireworms, and see the cloud of great, overgrown-looking mosquitoes that rise out of the grass. These are the parents of the wireworm, not the click-beetles. There are not enough of click-beetles in all Ontario to destroy the crop in one township, if they were all gathered together. J. B. MUIR.

I am sorry that your correspondent is mistaken in his ideas concerning these insects attacking grass land. The "overgrown-looking mosquitoes" which he finds rising out of the grass, in the first place, are not mosquitoes, and, secondly, are not the parents of the wireworm. They are commonly known as Crane Flies, and in England as Daddy Long Legs, and they are the parents of dark-gray, dirty-looking grubs, commonly known as Leather Jackets, and quite distinct from the wireworms, being larger in size, and totally different in structure. The Click Beetles, which are the parents of the wireworm, are extremely common if they are looked for in the proper place, and as each of these lays a large number of eggs, it is readily understood that one click-beetle may be responsible for a large number of larvae or wireworms. In addition to these two insects, a third beetle larva, the white grub, which is the larva of the May or June Beetle, or Bug, attacks the roots of grass and other crops, and causes great destruction, especially in Ontario. For this, as well as for wireworms, methods of cultivation are the only means by which these insects can be attacked. If he were able to study the life-history of the wireworm and these other insects, as we and other entomologists are constantly doing, he would be easily convinced of his mistake; but as he apparently has not followed out this life-history, I am afraid he will have to take the evidence of all those who have done so, both in the case of this and of other insects. C. G. HEWITT,  
Dominion Entomologist.

### Long Shocks in Favor.

Editor "The Farmer's Advocate":

In reply to query in "The Farmer's Advocate" of July 14th, re long versus round shocks, I would say that the round shock has been almost entirely abandoned in this district. Grain is shocked in long, open shocks of from twelve to twenty-four sheaves each. The shocks should run north and south, so that each side will share equally in the day's sun. The air circulates freely through the center of the shock, and the grain is soon dry enough to be hauled to the barn. The round shock is much more difficult to build, and takes twice as long to dry out. If well built, it will perhaps turn water better than the long shock, but the cap sheaves are liable to become sprouted. In the old days, when barley was grown for the breweries, and color was an important consideration, the round shock was in general use, as it shielded the grain from light showers and the night dew. Now, however, when barley is grown almost entirely for feed, the long shock serves the purpose much better and is much easier and quicker to build. W. E. WILLIAMS,  
Middlesex Co., Ont.

### Alfalfa Successfully Seeded with Corn.

Editor "The Farmer's Advocate":

In "The Farmer's Advocate" of July 14th, J. A. H. asks about sowing alfalfa in last cultivation of corn. I have practiced sowing alfalfa, as well as red clover and alsike, in the corn fields just before the last cultivation for several years, and have never had a failure in getting a good catch of these grasses in this way. The seed should be cultivated in, however, for, if sown on the loose soil of the last cultivation, the seedling plants are liable to be injured by dry weather, should it happen to set in after seeding. I believe it is profitable to sow all corn fields with clover or alfalfa at this season, even if the field is to be plowed the following spring. I frequently get considerable late fall pasture, and always have a good crop of fertilizer to turn under in the spring. Essex Co., Ont. J. O. DUKE.

The average farmer with eighty acres has 160 rotating drains of what he might accomplish with 160 acres, and he who has already 160 acres is sure he could "clear" twice as much with 320 acres. But the real fact probably is that, says an official publication issued from the Minnesota Experiment Station, each of them already has as much, and as to the average to the best advantage quite probably more, and that in his hands the rotated larger acre would not yield proportionately as much as the smaller. It is believed

JULY 28, 1910

After More Light.

Editor "The Farmer's Advocate":

Your editorial of June 16th reveals some misunderstandings of my position in the argument re the wood-lot, which, for the sake of truth and knowledge, I shall endeavor to make more clear. In the first place, I did not know that I was in a controversy. For the benefit of "The Farmer's Advocate" and its readers, I presented my opinions on the wood-lot problem mainly because I differed from the advice generally given by the press and platform to the farmers of this Province. I believed that the advice (backed by legislation) to maintain a wood-lot on our fertile soil in Western Ontario, was not in the best interests of the farmer. This much you have conceded, at least in such communities as have some rough land on which to maintain a wood-lot for the benefit of the community. And by community I presume you mean an area in which this forest wealth can be distributed by the farmer's own teams and men. But I would go much further than that. Wood for fuel is no longer a necessity; neither is building timber. It is merely a matter of relative cost, and this brings us to the consideration of the maintenance of soil fertility, which is the key to all successful farm operations. It is the farmer's bank, and, with our present knowledge, I cannot see how we can bank very much on the wood-lot as a maintainer of fertility. As far as I am aware, it has never been ascertained that trees obtain any of their food from the air, as do the legumes. Of course, I do not pretend to be an authority on this phase of the subject. I am perfectly willing to be corrected by "The Farmer's Advocate," as the obtaining and distributing of correct information is the chief excuse for its existence. Then, I have seen scores of "turn-ups," but none where the feeding-roots had penetrated more than a few inches into the subsoil. Though the leaves do return more than half of the whole fertility abstracted in a year's growth, that is no better than cutting a crop of timothy for hay, worth, at two tons to the acre, \$20, net, against \$4 for wood. As for flax-growing for fibre, it represents the extreme limit of poor farming, and should only be practiced in exceptional cases, and is obviously not a fair standard for comparison; but believing my opponent in the argument would need a wide range, I selected it for a target, but even here we have a favorable showing. Soil that will grow a cord of wood will grow two tons of flax, worth \$20, net. Now, a ton of timothy hay sold off the farm will carry with it about \$5.50 worth of fertility. I have never seen any figures for flax, but some years ago was informed by a prominent agricultural official that he understood flax was about equal to wheat in this respect, possibly \$14 for the two tons. This would still leave \$6 in favor of the flax, as against the wood, without counting the amounts removed by the cord of wood, of which I have no information; but, as a cord of air-dried wood weighs about the same as two tons of timothy hay when air-dried, I would suppose the amount of fertility removed to be about the same. This, of course, is largely guesswork, but perhaps "The Farmer's Advocate" can enlighten us. But, if true, the results are rather disquieting. By selling \$4 worth of wood we are throwing away \$11 worth of fertility; that is, we are \$7 "in the hole," whereas, by selling \$20 worth of flax, we are making \$6, besides having the chance of repairing the loss of the other \$14 by growing clover or other legumes, since it has been shown that clover, even when sold for hay, actually leaves the soil as rich as before it was grown, whereas, if fed on the place, and manure well saved, will rapidly enrich the soil. But if the timothy and flax be fed on the place (which is usually done in Ontario), thereby comparing conditions as they actually are, there would not be over \$4 per ton leave the farm as fertility; and, under the best practice in manure-saving, there would not be over half that amount. But "The Farmer's Advocate" will not allow us to compare conditions as they might be under the best practice, but it will take the very best practice to make his wood-lot produce \$4 worth of wood per acre. Of course, after a generation or two has passed, and the trees average 20 inches on the stump, if they have been kept clear of limbs for thirty or more feet up, his sons may realize about double that for them at present prices for lumber. But who is to pay the interest on the money, and how can they be harvested without destroying many others, which will cause branches to grow, and necessitate pruning. Then, the danger from wind is very great, and we cannot leave enough area in trees for protection. I do not see that the prices of timber here are so very "empty." Choice soft elm, basswood, hard and soft maple are worth \$10 per M., cut in the bush; rock elm, white ash and oak, \$15. But the slightest flaw or check will knock several dollars off these prices. Cherry, which used to be in great demand for furniture, reaching, I am told, \$20, is now worth no more than oak. White ash is used to some extent for pole stock, but it is far from \$10 per M. I think manufacturers prefer Georgia pine. If farmers can only make interest and improvements (and these are not striking) of their farms, do you think it wise to advise investment in farm land? I am not following the best

system of farming, but I can do a little better than that, and I think my grass land is increasing in fertility faster than that in the wood-lot. I am not insensible to the beauties of nature, but I prefer the trees near the dwelling, and not too high. I prefer the delights of the planted park to the bites of the mosquitoes and snakes in the farm wood-lot. If the farmer must plant trees, let them be fruit trees, which yield both pleasure and profit.  
J. H. BURNS.  
Perth Co., Ont.

[Note.—By community we mean the area served by a wood-lot, not only in respect to fuel and timber supply, but also in respect to the regulation of water flow, local protection from wind, to such moderate extent as this is possible; the harboring of birds, and the gratification of that aesthetic sense which is, after all, the best part of our being, and which responds to the beauty and dignity, the tang and the life of the forest, as to no other natural charm. The main point under discussion is this: Making allowance for difference in amount of labor entailed, and cost of maintaining fertility—saying nothing about the increase of available fertility in a wood-lot, which every intelligent farmer knows to be taking place, even had he not chemical data before him—how will the net annual returns of the tilled fields compare with the net annual returns of the wood-lot, if properly handled so as to produce a fair proportion of marketable timber products? In the editorial alluded to by our correspondent, we took the ground that the annual interest or rental charge was an approximate, even if not quite a complete, index of what the average acre of cultivated land is yielding to-day. We showed clearly, as Mr. MacMillan, Dr. Fernow and other authorities have also done, that it is reasonable to expect net returns from a well-managed wood-lot considerably exceeding such current rental value. Mr. Burns admits that he is arguing without precise knowledge of the basic facts. He proceeds on certain assumptions, asking us, in passing, whether the assumptions are correct. The fact is, they are not. Not "more than half," as he phrases it, but in the neighborhood of six-sevenths of the total ash material, and from two-thirds to four-fifths of the total fertilizing elements, in a year's growth of trees is returned in the leaves and twigs, only a small proportion being appropriated in the form of wood growth. As to relative composition, we find in Hopkins' "Soil Fertility and Permanent Agriculture" this comparison of flax and wheat, calculated on a percentage basis:

	Nitrogen.	Phosphoric acid.	Potash.
Flax stalks .....	0	.41	.64
Wheat straw .....	.48	.23	.63
Flax seed .....	3.28	1.30	.96
Wheat grain .....	2.08	.77	.52

Without splitting hairs, let us say flax grown for seed is about as exhausting as wheat, ton for ton, though these figures show it to be more so. Warrington offers the following comparison of the fertility removed in wheat and several kinds of tree growth:

	Wt. of crop, dry lbs.	Lbs. nitrogen	Lbs. potash	Lbs. phosphoric acid
Wheat, grain 30 bush.....	1,530	34	9.3	14.2
Wheat, straw .....	2,653	16	19.5	6.9
Total crop .....	4,183	50	28.8	21.1
Beech, wood .....	2,822	10	4.2	1.5
" leaf litter.....	2,975	39	8.8	9.3
Total produce .....	5,797	49	13.0	10.8
Spruce Fir, wood.....	3,064	—	3.6	1.3
" " leaf litter.....	2,683	—	4.3	5.7
Total produce .....	5,747	—	7.9	7.0
Scotch Pine, wood.....	2,884	—	2.3	1.0
" " leaf litter.....	2,845	—	4.3	3.3
Total produce .....	5,729	—	6.6	4.3

Warrington also discusses these figures as follows:

"Forest Growth—The figures given in the table represent the composition of the produce of beech, spruce fir and Scotch pine forests felled for timber, and are the results of extensive investigations made in Bavaria.

"The amount of dry matter in the annual forest growth is in excess of that yielded by any of the cultivated crops given in the table, excepting mangels. This large produce is obtained by a very small consumption of soil food; the amounts of potash and phosphoric acid required are especially far less than in the case of any farm crop. The greater part both of the ash constituents and nitrogen annually assimilated is returned to the

at the Minnesota Station that a far surer route to prosperity is to apply one's self to getting bigger crops out of the land already owned.

How We Have Used the Split-log Drag.

Editor "The Farmer's Advocate":

That the use of the split-log drag has proved a great benefit in cases where its use is applicable, all who have had experience in its use, and enjoyed the satisfaction of dry, smooth roads, where formerly mud and deep ruts prevailed, will surely agree.

As a direct result of the propaganda waged by "The Farmer's Advocate" in its favor, the use of the drag has been employed, and the good results obtained on the section of road here referred to. Unfortunately, conditions for modern roadmaking in this particular district are not favorable, owing to a deficiency of material, but, through experience, we have taken up the use of the split-log drag as a happy alternative. The few seams of gravel formerly available are now pretty well exhausted, while for some time the material to be had from such has proved but a poor substitute in the making of a road-bed, cutting through in the wet seasons under the heavy traffic of narrow tires almost as readily as sections on which none whatever had been used. The employment of such a method of performing statute labor in many cases is proving to the municipalities merely an expensive excuse for the performance of this task.

With the greater part of our clay roads grading had been pretty well accomplished, although in a great many instances drainage was sorely lacking. With this remedied, we concluded, owing to conditions previously discussed, that our duty towards our roads was the keeping in best possible condition at all times of the road-bed as it was. When it is properly crowned and drained, this can best be accomplished through the timely use, throughout the season, of the split-log drag.

When first we started to use the drag over the section of road in question, we found that the road was not in a condition to obtain best results from dragging. While the road had been carefully graded previously, gravel had since been put on, which had worn away; shoulders of sod had formed that must be removed before a proper crown to the road-bed and best conditions of drainage could be had.

Realizing the great benefits to be derived from the use of the drag if only the road be in proper condition, regardless of the gravel that had been applied, and now pretty well worn through, the pathmasters for the past two seasons have had the statute labor of the road division performed to this end, through the use of the drag, the plow and barrow, until now the entire length of the road has been gone over, and left in excellent condition for future work with the drag, as needed from time to time. By employing this means of grading, rather than using the regular road grader, we believe better work can be accomplished more expeditiously, and with less horse-power.

With the plow you are enabled to take a little or much off the roadside, or out of the ditch-bottom, wherever needed, to assist in levelling. Following the plow with a drag, with four horses attached, and a pole fastened to rear end, to be attended to by a couple of hands to assist in giving some added pressure and evenness of motion to the work, most excellent grading can be accomplished. All the clods and sods are well pulverized; and when compacted, through the use of the road roller, a perfect crown is given to the roadside and road bed. Then, after each rainfall, one stroke of the drag again brings in any soil that has worked to the outer edges, levels the ruts, and so maintains the nice, even grade, giving a perfectly smooth, dry road again after a few hours of drying. In order to insure prompt and unflinching grading, the division is divided into sections, each farmer being assigned a certain section of road. This is not only conducive to quicker work, but also more effective work, each one keeping his part of the work well up. Another point we endeavor to observe is that we do our roadwork or grading as early in the season as possible. This year it was performed during the first week of May, and so we have good roads throughout the season, while the soil packs down much quicker and firmer earlier in spring.

We are quite satisfied that much better work has been accomplished through the performance of our statute labor in this way than if we had spent the time as formerly, hauling a few loads of inferior material. While the macadamized road-bed is preferable where material and means are available, still is not a smooth, dry clay road very superior to many so-called stone or gravel roads, consisting of a ridge of coarse gravel in the center, with deep ruts on either side filled with the largest stones that have rolled there from the high center. Such a road is a most difficult place for a horse to travel on, besides being a continual wear on the nerves and pleasure of the traveller.  
Dundas, Ont. C. HAMILTON.

DEED 1866

rm.

wireworms I give you think it is ous opinion m. Check your or I through an art infested great, over-out of the wireworm, enough of the crop in ed together. B. MUIR. at is mis-cts attack-king mos-the grass, and, second-orm. They and in Eng-ey are the rubs, com- quite dis-er in size, The Click wireworm, ked for in ys a large ed that one rge number o these two grub, which le, or Bug, crops, and Ontario. methods of h these in- e to study these other s are con- vinced of s not fol- id he will who have d of other EWITT. omologist.

DP.

Advocate" shocks, I n almost Grain is twelve to should run will share dates freely the grain is barn. The build, and ll built, it long shock, e sprouted. n for the considera- use, as it and the y is grown serves the asier and LLIAMS.

eded

July 14th, last culti- ng alfalfa, corn fields aral years, ng a good The seed if sown on he seedling y weather. I believe with clover field is to quently get ys have a the spring. O. DUKE.

acres has accomplish 160 acres h with 320 that, says Minnesota ady has a est advan- his hands old propor- id believed

soil in the fallen leaves. If these are left undisturbed, and allowed to manure the ground, the requirements of the forest become extremely small—far smaller than in ordinary farm culture. It appears that about 3,000 pounds of perfectly-dry pine timber are produced with a consumption of only 2½ pounds of potash and 1 pound of phosphoric acid per acre per annum; with beech timber, the quantities required are rather larger. The amount of nitrogen in timber is very small; the annual growth of beech wood contains, on an average, about 10 pounds per acre. The amount in the leaves and seeds is much more considerable. Forest trees do not produce seed till they are of mature age; the seed is formed at the expense of matter previously stored in the tree. When the litter is not removed, the surface soil will gain considerably in organic matter (containing both ash constituents and nitrogen) during the earlier years of forest growth, and thus greatly improve in value.

"It is evident," writes Prof. Harcourt, in reference to this matter, that the leaves and smaller twigs will fall from the tree to the ground, and the fertility contained in them is returned to the soil. The only draught that the growing of timber really is on the soil is represented by the amount of fertilizing constituents in the wood. The figures which you have given for flax and wheat, I presume, are for the part which is above ground, or the part which is cut in harvesting the crop. It seems to me that the comparison made on such a basis—that is, the amount of material harvested, either in timber or in flax, and a calculation of the fertilizing constituents in that part, stands altogether in favor of the forest as a means of preserving or increasing fertility."

With regard to Mr. Burns' various calculations, it is necessary only to point out that he has ignored the important factors of seed, labor, and general farm-running expenses, as for implements, etc. This completely invalidates his conclusions. It is net returns, not gross receipts, that afford a basis for estimating the comparative profits of tree growth and field culture. By the way, he has not told us how much net profit per acre he makes from his own farm.—Editor.]

### The Rented-farm Problem.

The cry of increased cost of living, coming from the cities and towns, due, in part, to increased prices of foodstuffs, most of which are produced on the farm lands of our country, is but the inevitable result that has followed in the wake of the steady exodus of farmers' sons and daughters from the farm and farm life and employment to the towns and cities, with the promise of more congenial employment, and rosy prospects of greater independence early in life.

This, then, followed by the greater exodus from old Ontario to our Northwest, has in large degree stripped the Ontario farm of its greatest asset, and has lowered materially the producing power of the Province.

Land-owners, unable to secure satisfactory help to carry on their farming operations, have either turned their once cultivated and fertile fields into grazing lands, thus cutting in half their producing power, or else have sold their land and have retired before time, to join the army of consumers, and such invariably howl loudest about the increased cost of foodstuffs.

This condition of affairs has resulted largely from the placing of a false value on the conditions surrounding Ontario farm life, especially when compared with town or city life and conditions in the Western parts of Canada. Young men of Ontario have failed to see that there never has been a more favorable time for Ontario farmers than of late, and never such a time for young men to save money and gain an independence. Older men have been shortsighted, and many a father has encouraged his boys to choose some other calling, or advised them to seek their fortunes in the West, whereas, by extending their operations, and renting another farm alongside of their own, they might easily have doubled or trebled their income, and have made satisfactory wages for every boy in the family, and thus earned capital sufficient to start each of them farming, with as good a chance of success as he enjoyed himself.

The greatest stumbling block in the way of many a young man of the farm is that he is too proud to work for wages at his own business. The wage earner on the Ontario farm, if he is a young man, is in a fairly good position at the present time. Then, next to this evil, is a positive aversion to tenant-farming, the only way the man with small capital can farm safely and profitably. By means of these two despised methods of gaining capital, namely, wage-earning and tenant-farming, if he will quit dreaming and get to work, any good, wide-awake farmer's son, or any young man in this Province, may realize the worthy ambition of owning a farm of his own, if he has health and strength and a determination to succeed.

Now, I mean that he shall begin by wage-earning, and we will suppose he is eighteen years old. A young man of the right stamp can earn and can get from \$200 to \$250 and board, at the

present time; and, when he counts lower cost of clothing and the lesser temptation to spend his money, he will save as much money per year as in any other employment. Do not think of choosing the lower flat of a departmental store, shut away from the pure air and light of heaven, opening boxes of goods in dust as bad as a threshing every day, in preference to the opportunity of learning how to operate and manage every detail of farm work, and fitting yourself at the best time of your life for becoming a successful farmer.

In five years you should have saved \$1,000, and you are twenty-three years old. You will have no trouble to invest that amount in mortgage on some town dwelling or store; or, better, a mortgage on a piece of land, and at present it will bring at least 5 per cent. interest. Then go ahead for four years more, and you should then have another \$1,000, or a total of \$2,000, and you are twenty-seven years old. You are now in a position, as to capital, and should be, so far as a knowledge of your business is concerned, to rent a 100 or 125-acre farm. You should have enough money to pay for your stock, implements, etc., necessary to go on and earn some money. Look out for good land and good buildings, especially good stabling for stock, and as good a location as possible with the other requirements for good farming.

Get a 7 to 10-year lease, if possible, because short-time leases have tended to bring the average rented farm into the state in which we find it today. The tenant knows he may only have a short run, and he takes all he can out of the farm, and especially in his last year; he sells grain, hay and straw, and then goes on the next farm to do likewise.

A ten-year lease would induce a man to build



A Neat Cement-block House.

But appearance spoiled by lack of spaciousness and greenery. Fence is too close to the house.

up the land, with fair hope of getting a return for doing so. Take a look at the average rented farm of to-day, and what do you find? Just the last farm you would buy—dirty, with poor fences and buildings, and gradually becoming worse. What is or who is to blame? Both landlord and tenant. The tenant often makes the mistake of starting with too little capital. It requires more capital to farm successfully now than it did twenty-five years ago. Let the land-owner know that you can buy and pay for twenty cows, and the other equipment necessary to farm 100 acres, and, if he is a wise man, he will furnish the necessary equipment for you.

If rents were more in proportion to real worth, and men were sure of good farmers as tenants, there would be more farms held as a safe place for money, and they would prove a safe and good investment for their money.

But I have almost forgotten that you are 27 years old, and, best you should make the mistake of your life, and start farming on your own account as a bachelor. I must not forget to advise you to marry at that age, and just when you start farming for yourself.

And what I have said in advice to young men applies in great degree to young ladies as well. Work for women on the farm and in the farmhouse is not to be despised, as is plainly evidenced by the fact that, no matter what employment a young lady may have chosen, just as soon as a young farmer wants a housekeeper, and someone to unite her hand and fortune with his, he usually finds one; and, so far as true happiness is concerned, their farm home is formed, and they may be just as contented and as independent as those engaged in any other business. Very many merchants and other business men, like you, have only moderate capital, and, like yourself, have it all invested in their stock-in-trade. And, moreover, you are just starting the second step which

I have outlined towards owning a farm of your own. You carry much less risk than by buying and mortgaging for too great an amount. At the same time, you gain a knowledge of farm management which will be useful to you when ready to invest your own capital, and, for aught I can see, you should be more contented and happy than those who own their farms only in name, but are mortgaged for nearly all they are worth.

But ten years have gone, and you are 37, and, starting out with enough capital, you should have some money saved. I would say you ought to have saved an average for the ten years of \$300, or \$3,000 all together, and you would have a total capital, with stock and implements, of \$5,600.

You can now safely invest \$3,000 in a farm worth \$6,000 or \$7,000, paying half, and with good prospects for paying off the balance of the mortgage in a reasonably short period of time.

You should do it in ten years more, with good health and good management, and, having started at eighteen without a dollar, at the age of fifty years you have a total capital of almost \$10,000, and that invested in a farm, with stock and implements.

Show me a man in town or city who, at his age, is more independent or comfortable than he. He has enjoyed the advantages of a farm home, under the splendid conditions, social, educational and moral, which prevail in Ontario, and has realized the ambition of his early life, and is the possessor of a farm home of his own in old Ontario. ROBT. McCULLOCH.

Peel Co., Ont.

### Labor and Materials for Cement Silo.

Recently, D. M. Jackson has just finished building a cement silo for J. Bray, Raglan, Ont. An accurate account of material and labor was kept, and is here submitted for the benefit of those who are contemplating the structure of a silo. The silo is fourteen feet in diameter, thirty-two and a half feet high, and has a four-inch floor. It required 37½ barrels of cement, 35 yards of gravel, and 10 yards of stone in its construction. Seven men were employed seven and one-half days, doing all work by hand.

## THE DAIRY.

### Sanitary Cow Stalls.

Many good suggestions for men building or renewing dairy-cow barns are contained in Bulletin 185 of the Wisconsin Experiment Station. Cleanliness, sunlight, ventilation, comfort and convenience are the dominant factors in stable construction. Milk, cream, butter and cheese trades all require freedom from filth, odors or disease germs, and only by providing for the foregoing items are these ends accomplished. In the earlier days of dairying, few of these things were considered. Dark stables, poorly planned, wooden floors and gutters, and rigid stanchions were customarily used. In the erection of new stables, it is an easy matter to arrange for plenty of light, while in the new or renewed old stables all the other factors may, by careful planning, be obtained. In either of these cases, the entire stabling is being installed so that the interior is free for the execution of the best available plans.

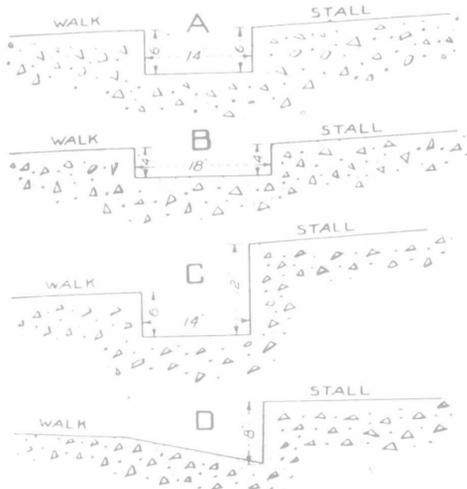
The floor gutters and mangers may be of wood, brick or cement. Plank floors should not be used in cow stables. They are easier for the cows to stand on, are not as cold, and initially may cost less, but they wear out quickly, they absorb the moisture, and consequently retain odors, and cannot be flushed or washed satisfactorily. A good floor is made of brick set in cement mortar, and washed over with cement made thin enough to be applied by a broom, thus filling all cracks and making an even surface. It is not easy, however, to make the mangers of such materials, so that generally wooden mangers are used with this type of flooring.

If floors rest upon the ground, concrete should always be used in their construction. It makes the most durable and most sanitary floor for a dairy barn. It should be used in the construction of the entire floor, gutters and mangers, and from three to four feet of the entire wall from the floor up. Floors should slope either to one end or one corner center. A slope of from one to two inches in eight feet is ample, and three-fourths to one inch is sufficient for the average stall. In laying such floors, the ground should first be thoroughly tamped, making it solid; upon this is spread three inches of mixed concrete, consisting of one part cement, 2½ parts clean sand, and 5 parts broken stone or clean gravel, spread in one continuous layer. If a finishing coat is desired, 1 part of cement to 2 of sand, is used, and is usually about three-fourths of an inch thick. This coat should have grooves about one-fourth inch deep, running in lines, both ways, four inches apart, to prevent slipping.

JULY 28, 1910

The following diagrams represent the different types of gutter construction, which are self-explanatory. Each has its advocates.

Many men advocate the use of stall mats made of seven-eighths-inch lumber, so placed that they may be easily removed frequently for cleaning. They are used to keep the cows off the cold cement in winter, where straw litter or other bedding is not plentiful, making an easier material to stand on, and preventing rheumatism. They



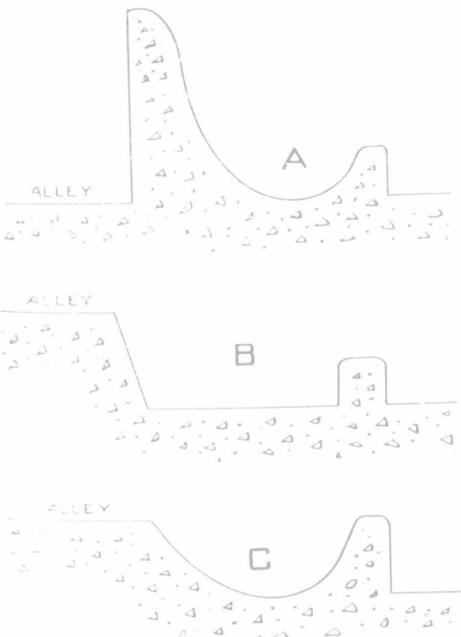
Four Types of Gutters in Common Use.

Forms A and B, which are similar, are most commonly used. C and D are less generally used because of the greater depth of C next the stall, and the sharp angle in D, which may be difficult to clean.

are not entirely necessary. Sufficient bedding, if available, will accomplish the same ends. With a sloped cement floor, mangers, and steel stanchions, the entire stable may be easily flushed thoroughly daily, making it clean as a house. If the mats have to be removed, it takes much labor, and so prevents the frequent thorough scrubbing.

Liquid manure must be preserved. Plenty of bedding will absorb, and thus keep it from waste. Another method consists of a storage cistern, conveniently located, into which it runs. Traps must be placed in the gutter to admit the liquid excrement into pipes leading to the cistern, at the same time withholding the solid manure. These pipes must be of good size, and as straight as possible. On the average farm, the absorption method, rather than the cistern method, is the most convenient.

Below are three types of cement mangers. These are built in at the same time as the floor. They can be used as water troughs very satisfactorily, and in every way give satisfaction in use. They never wear out, and always are kept sweet and clean. Movable partitions can be arranged between the individual animals, for use when special feeding may be necessary.

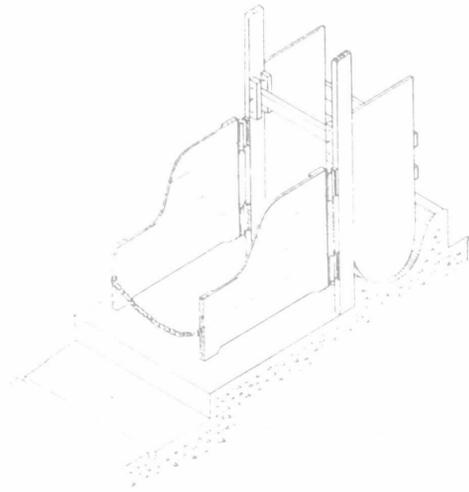


Three Types of Common Mangers.

Form A has a wall two feet high in front of the manger. B and C have no front walls, being placed below the level of the feeding alley, where they are easily cleaned, and so more sanitary. These mangers should be about two feet wide, with the sides of the manger six to eight inches high.

There are several types of stalls in use, of which there are many adaptations. Below are diagrams of the leading types of stalls that conform to the standards of convenience, comfort and sanitation. The early type of rigid stall is becoming largely discarded, and rightly so. While fairly convenient, it is anything but comfortable, and interferes with lighting and cleaning.

The Helendale stall has many adherents. The swinging partitions may be hooked back to allow



The Helendale Stall.

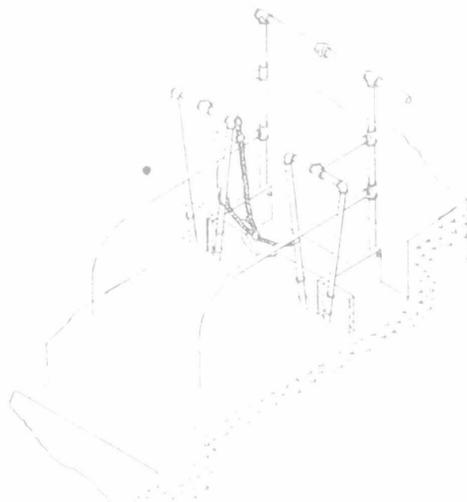
This stall has swinging partitions, which may be hooked back to the manger, leaving the stall space open. The self-centering hinges are an essential feature of these partitions.

of easy cleaning; while in place, they keep each cow from tramping on her neighbor. The solid crossbar in front prevents the cow from getting too far ahead, while the chain prevent her getting into the gutter. The essential feature in this stall is the self-centering hinge, which brings these partitions into place when free. The chief objection to this stall is its interference with the distribution of light in the stable.

There are two adaptations of the Ideal stall, one of wood, the other of gas-pipe, called the New Ideal. This latter is a very desirable stall. If old gas-pipe is obtainable, it can be cheaply built, and easily comes within the class of homemade articles. Using a concrete manger, the pipes may be set in the concrete, giving a concrete-and-metal stable throughout. Water cannot hurt it; cleaning is least interfered with, and there is practically nothing to interfere with the light.

The Ideal has many of the good features of the New Ideal. However, the wooden materials will not stand the wetting as will the metal; moreover, the gas-pipe partitions between the cows take a more serviceable form than do the scantlings.

Another very desirable type of stall consists of



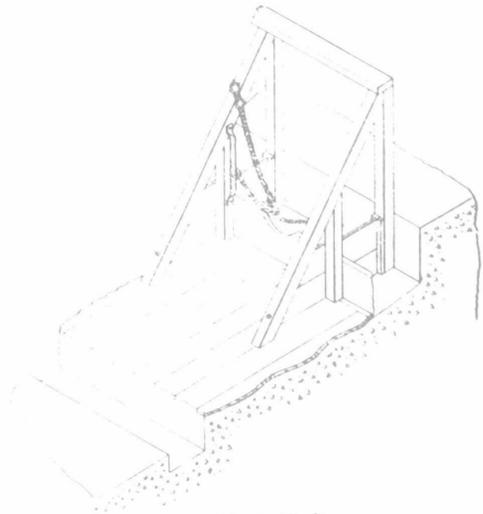
The New Ideal Stall.

This is one of the most sanitary of simple homemade stalls. The guides for the chain-tie are placed at an angle which tightens the chain, drawing the cow nearer the manger when she lies down, bringing her forward, and so keeping her clean.

the swinging stanchion, which is a variation of the rigid type, and, combined with the gas-pipe construction of the New Ideal, is very serviceable and satisfactory.

In the bulletin referred to, the cost of some of the above-mentioned stalls is given. All mate-

rials and labor are represented in these costs. The Helendale costs, per stall, about \$5.70; the Ideal, \$4.50; the New Ideal, about \$7.20. In the New Ideal, the cost of the new gas-pipe is the chief factor in creating the extra expense. This may be reduced in many localities by obtaining the old gas-piping. These prices have no reference to the floor mangers, etc., but do include floor mats in all cases. Prices of materials and all other elements entering into the cost cannot



The Ideal Stall.

This type of stall is essentially the same as the New Ideal, but is of wooden construction. Both give maximum freedom to the cow. The manger partitions are usually omitted, increasing convenience and reducing cost.

be accepted as absolute in application to Canadian conditions, since, in the bulletin, they apply to Michigan, Indiana and Wisconsin conditions.

## POULTRY.

### 1,200 Chicks in His Orchard.

Editor "The Farmer's Advocate":

I was induced to undertake the hen business in a somewhat extensive scale by the reports of the scarcity of reliable eggs in Canada, and from the fact that quantities had to be imported from Europe last season. I have reasoned that, with feed as cheap as any place in the world, and a favorable climate, as we have in Essex County, we should at least produce all the fresh eggs we can use in Canada for some time to come.

We have now 1,200 little chicks running in the orchard, which is thoroughly cultivated, and are having remarkable success. They get all the chopped wheat and corn they can eat, fed from hoppers dry, but no water. They have plenty of room (at least 40 acres) to forage over, and have had no diseases or lice, or any troubles, as yet. Chicks are hearty and busy, and appear happy. We keep them in small coops for a week or ten days when first hatched. After they are allowed to run on fresh ground, they eat very little. Our chicks are all June-hatched, first lot of 600 coming June 1st, and up to date, 1,200 chicks and 150 hens have eaten only \$25.30 worth of feed, and during that time these hens have produced \$9.00 worth of eggs.

Our chicks are all hatched and hovered by hens, and the eggs are produced by the hens not having chickens.

J. O. DUKE.  
Essex Co., Ont.

It would be incredible, were it not indisputably true, that some men could be so shortsighted as they are. It is plain as daylight that the organization and loyal support of co-operative egg circles would be a benefit to any rural community, and incidentally a blessing to the local storekeepers who now have to handle farmers' eggs at a small margin, in order to hold trade from competitors. Yet, strange to say, one of the storekeepers in Peterborough threatened to "smash" the egg circles, no matter what it might cost. He proceeded to implement his promise, running prices away up—in trade. It should not take, and we believe has not taken, the circle members long to see through a game of that kind, but the wonder is that any merchant in a city like Peterborough should be so contemptibly narrow and shortsighted as to try it.

As illustrating the risks run in handling eggs under present conditions, John A. Gunn, a Montreal produce man, recently told this somewhat exaggerated story. A customer in a restaurant, thinking to order eggs, asked the price. "Two for a quarter boiled, two for a dollar fried," was the answer. "Why, how does it come there is such a difference?" "Boiled you take the risk, fried, I take it" was the illuminating reply.

### Fleshing and Marketing Poultry.

From an address by A. P. Hillhouse, Bondville, Que., before the Eastern Ontario Live-stock and Poultry Show, Ottawa, 1910.

I sometimes think that poultrymen are divided into classes, very much as poultry themselves are. In poultry we have the utility class, and the fancy class—both important and necessary to the poultry world. In poultrymen, we have the working class, and the talking class—also both important and necessary.

Not being one of the talking class of poultrymen, I feel quite out of place in attempting to say anything to you on poultry matters.

However, as I have had considerable experience in feeding and marketing poultry, I will try to give some of that experience as best I can.

Taking up the subject of feeding, dressing and packing chickens, in feeding we will confine ourselves to the last period of the market chicken's life, the feeding or fattening for market.

The question at once arises, "In what manner can this best be done?" Most decidedly, in crates. We have several objects in crate-feeding: One is that we wish to fatten our chickens, as we do our other stock, before marketing, that we may receive the best and most profitable price; another is that, from confinement, entire lack of exercise, and soft milk feeding, we change and improve the table qualities of chickens.

There is no comparison in the quality of the flesh of a properly crate-fatted chicken and that of a chicken allowed to run at large until market day, even providing it were possible to get them equally well fleshed or fatted.

Now comes the question of what we are to feed. Do not make the mistake of thinking that you must have the same kind of a balanced ration for this period as you have had for other stages of the chickens' growth. You do not want to produce bone and muscle now, you want a fattening ration.

Not long since, our association was called upon to pack and grade a small lot of crate-fed chickens. Much to the surprise and disappointment of the owner, we found them very little, if any, better than when they were put in the crates, all having to be graded No. 2. On making inquiries as to feed used, we found that they had made what they supposed to be a balanced ration, buying the required number of pounds of wheat, oats, buckwheat, etc., having all ground up together, and fed mixed with milk in the usual manner. In looking up the samples of grains from which this was taken, we found the wheat badly shrunken, the oats very light, and the buckwheat equally poor, and his chickens had been consuming about three parts bran, oat and buckwheat hulls to secure one part of fattening matter. This shows the importance of giving thought to and knowing something about the composition of the feeds we feed. We do not lay down any hard or fast rule, or ration, but buy what appears to us to be the best fattening value for the price paid.

For instance, last season, or 1908, corn meal was very high in price with us, as we had to pay from \$1.75 to \$1.90 per hundred pounds, while feed or low-grade flour, barley and buckwheat meal could be bought for considerably less. We, therefore, fed very little corn meal. This season, or 1909, just the reverse was the case, as we could get any quantity of corn meal at from \$1.40 to \$1.45 per hundred pounds, while the other grains before mentioned were from \$1.75 to \$1.80 per hundred pounds; consequently, we fed mostly corn meal. Whatever feed is fed should be mixed with milk, as you cannot get best quality or feed most profitably without this.

We mix all feed about to the consistency of good thick porridge, feeding twice each day, making sure that each bird has all it can eat, allowing food to remain in troughs for about 20 minutes or half an hour, after which all remaining food is cleaned out. It is very important that this should be done, as, if food is allowed to remain long in troughs, the birds lose their appetites, and do not fatten as well.

Now comes the question of length of time for feeding in the crates. Just here is where you must again use reason and judgment, but I think all practical feeders will agree that you cannot get best quality with only ten days' or two weeks' feeding, as the practice of some is. We never kill a chicken with less than three weeks' crate-feeding, and oftener give them four or five weeks than we do three. We give them a longer period of crate-feeding now than we did when we first began the business, as we are always after a better quality and a better price.

There are two methods of killing most universally adopted by dislocation of the neck and bleeding at the mouth. We prefer the dislocation method, as we consider it most humane, and we can do our work much more rapidly and neatly with this method.

In killing a large number of chickens day after day, we find it essential to adopt the best timing position, and to avoid work sitting.

The hanging board is quite an important part of the business, as, although it does not affect the quality of the carcass, it does the appearance, and next to good appearance is essential, as we keep our

old customers with quality, and secure new with appearance.

Packing is also a very important point, as, after giving best attention to all other points, we do not put our chickens up in good neat packages or boxes, we will stand to lose something in price from this point alone.

We have never found any box equal to the one-dozen regulation box described in Bulletin No. 7, issued by the Department of Agriculture, Ottawa. These boxes give complete satisfaction to the trade, as they are made in five different sizes to suit all sizes of chickens, and one dozen chickens of uniform size and quality can be packed in each box.

We are looking forward to the time—and, we hope, in the very near future—when all the poultry produced and marketed in this Canada of ours will be sold according to quality, with established grades, as it is the only fair way, being equally so for producer, dealer and consumer, and would simplify the whole poultry trade, guaranteeing to all fair treatment and value for price paid.

### Likes the Incubator.

Editor "The Farmer's Advocate":

I have used an incubator for nine years. Its advantages are that one can hatch chickens early, and secure the high prices for broilers prevalent in April and May. My incubator is of 120-egg capacity, and can be attended to more easily than the number of hens it would take to cover that many eggs. The incubator never spoils eggs by leaving them, never tramples newly-hatched chicks, breaks no eggs, and to it hen lice are an unknown quantity.

The only disadvantages I ever found in an incubator are, white diarrhea in newly-hatched chicks, and too many fertile eggs not hatching. Regarding the former, we had chicks enough die one or two years to discourage any poultryman, but we never had healthier chickens than we have had the last few years. Probably, if that disease had not made its appearance, chickens would not be worth raising. Although I have always had too large a percentage of fully-developed chicks not hatch, the result of my last attempt this season shows conclusively that, with the proper conditions existing, the incubator will hatch just as well as the hens. It would not be fair to compare the hatch of one hen to that of an incubator. The cost of running is: 3 gallons coal oil, at 18 cents, total 54 cents; 1 lampwick to two hatches, 5 cents; five minutes three times a day for three weeks, 75 cents; total, \$1.34.

I have not discarded my incubator, nor do I intend to. We tried giving newly-hatched chicks to hens, but like the brooder far better, and are positive they grow faster and are more easily looked after than with hens. The thermometer in my incubator hangs above the eggs, and the rules say to run at 103 degrees. I run the machine at 105, as this makes 102 on the eggs, the average heat of a hen.

I don't believe so much in turning twice a day as in changing the relative positions of the eggs. I have found the essential conditions for securing a good hatch are: Strong fertility in the eggs, good ventilation where incubator is running, and the correct amount of moisture. The last hatch we had this season was the best we ever experienced in the nine years, namely, 100 strong chickens from 108 fertile eggs. The eggs were secured from hens that had not laid very heavily during the winter. One male bird was mated to twenty females two weeks before eggs were to be used for hatching.

The incubator was run in a cellar where the floor would dry up. The first hatch I moistened the eggs frequently, and got 54 chicks. The last hatch I kept the floor soaking wet, used none in the machine, and got 100 chickens. In each case 120 eggs was the original number, and the eggs tested about the same. I consider, from my own experience, that 50 is a fair percentage of live chicks; that is, 50 per cent. of eggs set. I believe, with the moisture problem solved, the incubator is away ahead of hens.

Wentworth Co., Ont. J. BERTRAM.

### Professors Praise Alfalfa for Poultry.

From ten acres of alfalfa over which 1,000 hens and 3,000 chickens had been running a good part of the time, not to mention the colony houses, on the same area, Prof. Elford, of Macdonald College, tells "The Farmer's Advocate" that he cut about 21 tons of hay. He finished taking care of this first cutting the last week in June. The second cutting was ready to begin on by Monday, July 18th. He sold 17½ tons of this hay to the Farm Department, and put away between three and four tons for the use of the Poultry Department.

"I have fed 28 cows this spring," commented Prof. Graham, of Guelph, "for five days from the alfalfa grown on half an acre of land, over which a large flock of young chickens had been running. We find that the chickens do not damage the first cutting very much, although the larger hens will make some runways through it. They do no harm to the second cutting, and, as a rule, I have

not been able to get a third cutting at all from my little plot, as by that time they are large enough to eat and trample most of it down."

### Marketing Good Eggs at a Profit.

(Abstract of an address by Prof. F. C. Elford, before the Poultry meeting at Chatham, Ont., on July 16th.)

We must cater to the consumer. If my customers wanted green or blue eggs, I would give them what they wanted, and charge them well for it. You will have no trouble in charging them, if you give them what they want. And notwithstanding all that is said about high prices, they are more interested in the quality than in the price. The reason of the boycott against eggs last winter was not the price, but the fact that the quality was not what it should be. There are hundreds of thousands of consumers in the cities looking for a prime article, and willing to pay for it. I would not sell an egg for the price you sold your eggs for here this morning, nor a broiler for the price for which you sold your broilers. Of course, I might be so circumstanced for the time being that I had to do it, but if there was a system whereby I could get more money for my products than I was getting, I would get after that system. I remember the time when we sold eggs for 7 and 8 cents per dozen, and well-grown cockerels for 40 cents per pair.

The sooner after an egg is laid, the better it is. I suppose nine-tenths of all the eggs sold in Toronto and Montreal markets reach the consumer from two to four weeks, or more, after they are laid. Now, an egg is not first-class when it is four weeks old, and many of them are far from fit for eating. These eggs are kept, in the first place, on the farm for from one to seven days, and then held by the grocers perhaps for another week. I was in a bakery last week, where they were using a large quantity of eggs. Every one was broken into a cup, and I was told that frequently they run 10 per cent. bad, often 20 per cent., and occasionally 40 per cent. Now, who pays for that? The producer. Prices in the district where eggs are purchased are gauged according to losses from that district. Is it right that those who put up a good article should pay for the foolishness and dishonesty of others? I believe that most of the bad eggs marketed become bad through ignorance. At this time of the year, an egg under a sitting hen for 12 hours is unfit for use. Some people do not know this. They do not know that a nest of eggs found in the stack should not be marketed. Be honest. Co-operate, and get your stuff on the market as soon as possible. Do not be afraid to tell your neighbor; you will make more money out of your products if you let your neighbors know what you know, and enable them to produce a better article, too. It will help to bring up the general average. This improves markets and prices. Then market your products in an attractive form. Two lots of eggs, one sorted, and the other unsorted, will not bring the same price from a discriminating customer. Go down to the market and look at the berries offered for sale. There are two boxes side by side; one has as many berries as the other, practically as much eating, but in the one box the berries are smaller, are mussy, and not so attractive. You will willingly pay more for the other box. Every customer, whether he knows it or not, looks at this relative value. For our eggs in the winter, we in the Poultry Department at Macdonald College, get 70 cents per dozen because they are fairly uniform in size, all strictly fresh, graded to color, and put up in a nice package. Our only trouble is that we cannot produce enough. To help out, I used to get a few eggs from some of the neighbors. One time I got in 300 eggs, supposed to be absolutely new-laid. It turned out that 20 of these had small chickens, 90 were stale to bad, and 180 were fresh. I went to the woman who supplied the eggs. She insisted they were all strictly fresh, but, going into the matter, it finally came out that, not having enough of her own, she had gotten some eggs from her neighbor. She thought it would not matter, because they were all going to Montreal. That kind of business will not do. In order to get the highest prices possible, we must demonstrate that all our eggs are absolutely new-laid and best class. In the Province of Quebec there is one co-operative egg circle operating through a cheese factory, and the members getting from 2 to 15 cents per dozen more than their neighbors. I have a letter from the manager of another circle who remarks that the farmers out through his section are getting 2 cents per pound for their poultry, either live or dressed, more than their neighbors, and he adds, "We can sell and get a higher price than any of them shipping direct, because we have a guarantee of uniform standard."

If I were a consumer, I would purchase my chickens indrawn with the heads and feet left on. You then know better what you are getting. Open a chicken, and you see what you get to all sorts of purposes. Prof. F. C. Elford.

**GARDEN & ORCHARD.**

Matters appear to be moving, though slowly, toward the provision of a proper fruit market in Toronto, Ont. As noted in "The Farmer's Advocate" of July 14th, the City Council passed a resolution favoring the establishment of an open fruit market, which will be free to all parties for the sale of fruit, both in a wholesale and retail way. The Property Commissioner, Mr. Harris, has received instructions to prepare plans and estimates of the cost of a suitable building, located in a position that would give easy access from both railways and from the steamboats. The fact that the wholesale fruit jobbers have secured control of the present market was the cause of this action on the part of the City Council. The Ontario Fruit-growers' Association has a committee that has been working on this matter, and will do its part towards continuing the agitation, with the hope that something will be done in the near future.

**Cabbage Worms and Lice.**

What is a good cure or a kind of spray for the maintenance of cabbage plant lice and worms?

W. B.

For cabbage worms, a mixture of pyrethrum (insect) powder and flour, one pound of the former to four of flour, kept in a close cannister or jar for twenty hours, will give five pounds of powder that is death to every caterpillar it falls upon, according to the late Dr. Fletcher. It not only kills by coming in contact with the insects, but if rains and dews fall upon the plants, the powder makes a liquid which is likewise fatal. For the larger growers of cabbages, Dr. Fletcher was of opinion that it would pay to get one of the bellows sold by seedsmen for applying dry insecticides. For those who grow only a few cabbages, the simpler way is to take about half a pound of the material, put it in a small muslin bag, then tie that with a piece of string to a stick, and let it hang from the end of the stick. With another light stick, tap the bag, and just enough of the powder will drop on each cabbage to kill all the caterpillars on it. This way is more economical of material than the bellows, but not so economical of time. Some entomologists recommend Paris green, either dry or mixed with water, on account of the possibility of the poison getting into the center of the cabbage head through the tunnels which the cabbage worm has a habit of eating into the center of the head.

For the aphides or plant lice on cabbages, the remedy is spraying with kerosene emulsion or whale-oil soap solution upon the first appearance of the lice. The formula for kerosene emulsion is coal oil 2 gallons, rain water 1 gallon, soap 1 pound. Boil the soap in the water until all is dissolved, then, while boiling hot, turn it into the kerosene, and churn the mixture constantly and forcibly with a syringe or force-pump for five minutes, when it will be of a smooth, creamy nature. If the emulsion is perfect, it will adhere to the surface of glass without oiliness. As it cools, it thickens into a jelly-like mass. This gives the stock emulsion, which must be diluted with nine times its measure of warm water before using on vegetation. The above quantity of three gallons of emulsion will make 30 gallons of wash. Dr. Fletcher used to state that infested cabbages might be dipped in kerosene emulsion before storing for winter. As the eggs are laid in autumn on the leaves of cabbages and turnips, remnants of these eggs should always be plowed down as soon as the crop has been got in.

**Artificial Heating of Orchards.**

Artificial heating of orchards to ward off injury by frost, has come to be recognized as a feasible commercial proposition, to be advocated and practiced where valuable fruit crops are endangered by an unseasonable dip in temperature. We publish below a letter received from J. W. Crow, B. S. A., Professor of Pomology at the Ontario Agricultural College, who made a trip to the Pacific Coast fruit districts last summer, visiting the Grand Valley, Colorado, in August, and while there was handed the photograph from which the accompanying cut was made, together with the explanatory notes which follow, in the form of a despatch dated Grand Junction, Colorado, Nov. 18th, 1905.

"The Hamilton orchard, one of the pioneer fruit-growers of Mesa County, is out just \$5,000 because he did not use smudge pots for his entire 20-acre apple orchard during the severe freeze last spring. He is ahead \$5,000 because at the last moment he decided to experiment with the use of smudge pots on ten acres of his tract.

"Mr. Hamilton today sold the yield of the ten acres he did smudge for \$5,000. The ten acres that did not smudge produced nothing. Mr. Hamilton, as well as all his neighbors, is now convinced that the California smudge pot system is the best way of protecting orchard blossoms during freeze periods.

"The Hamilton orchard is near the 1,000-acre fruit farm of V. Z. Reed, where many thousands of pots will be provided as soon as the trees set out begin to bear fruit."

"I understand, from reliable authority," writes Prof. Crow, "that this spring, for the third time, they demonstrated to their entire satisfaction the feasibility of fighting frosts. Their crop this year will amount to 2,500 cars, and but for the use of orchard heaters, the entire crop would have been destroyed. It is reported that the apple crop of the Central States was entirely lost, the only section escaping being Grand Valley, Colorado, and in that locality almost every orchard was equipped with frost-fighting apparatus. Various styles of heaters are in use. Those most in favor, so far as I could learn, use a grade of crude oil known as 'fuel oil,' although splendid success was said to have been had with heaters using coal for fuel. Oil is more expensive, but is much more easily regulated, and is more convenient to handle. Fifty or sixty of the large-sized heaters are required to an acre, while, of the smaller kinds, as many as a hundred are used. These are placed in position before they are likely to be required, and are all ready for business. The growers, through their local fruit-growers' association, are in close touch with the United States Weather Bureau, and on the approach of frost every orchardist is notified by telephone of the danger. Some growers use a system of electric frost alarms, and these are said to be satisfactory, although most growers depend on reliable thermometers placed at various points in the orchard. Actual injury to blossoms does not occur until a temperature of 28 degrees or lower is reached. As a rule, however, the heaters are lighted before the temperature reaches 32 degrees, as it is considered much easier to keep the temperature above 32 degrees than to raise it to that point once it has fallen. The oil-burning heaters are fitted with covers that serve to keep out rain during the time they are standing idle in the orchard. A small handful of cotton waste is placed in each heater, and enables the oil to be readily lighted. When it is decided that heat is needed, men go through the orchards, using torches, and in a few minutes the heaters are all in operation. They have been successful in keeping the temperatures in their orchards above freezing-point when the temperature outside the heated areas fell to as low as 20 degrees F.

"I am quite satisfied that Canadian fruit-growers could make good use of these frost-fighting appliances. Oil is more expensive here than it is in Colorado, but the amount used is not prohibitive as to cost, and the heaters can be laid down here at a very moderate outlay. They are quoted at \$20 to \$30 per hundred, f. o. b. factory, and most of the orchard heaters intended for use in Colorado and other parts of the West are manufactured in the Eastern States, so that freight rates to Ontario points would be only moderate. Oil is worth, in the Lambton County oil fields, about \$1.78 per forty-gallon barrel. It could, no doubt, be procured there in quantity at a very slight advance over this price. Barrels cost \$1, and cartage and freight rates to points in Ontario would still further increase the cost per gallon. It is probably quite within the mark to say that

oil can be laid down at any Ontario point for less than ten cents a gallon. There are usually not more than three or four nights in a season when one would require to make use of the heaters, and a heater burning one quart per hour is considered to be doing excellent work. One can calculate from these figures the approximate cost of heating an acre for one night, or any number of nights, as the case may be. In addition to their use in orchards and fruit plantations for protecting bloom, they would also be of great value to tomato-growers and producers of tender vegetables for use in preserving the crop from early frosts in fall. In my opinion, they would in many cases much more than pay their cost. If frost conditions prevailed for several hours at a stretch, it would, of course, facilitate matters very greatly if the large-sized heaters were used, so that no refilling would be necessary. The large ones cost more, but would probably be worth the extra amount."

J. W. CROW.

**THE FARM BULLETIN.**

**What is the Matter with Ontario Agriculture?**

Editor "The Farmer's Advocate":

It is not the intention of the writer to attempt to answer the question, "What is the Matter with Ontario Agriculture?"—that will be left for more experienced hands—but only to express my opinion on the criticism and solution of the problem, as offered by one styling himself, "One of the Un-enterprising."

He says the opening demand for farm produce is very apparent, but, in spite of this, the farmer is not putting forth any great effort to meet it. If every farmer were convinced that he could sell profitably all that his farm was capable of producing, surely greater efforts would be put forth. The five or six acres of new land by the bush would be broken up and sown; underdrains would be put down to drain the swamp in the "corner" field, and fit it for the production of something; and many more things that would increase the yield of the farm would be carried out. Leaving parts of the farm in a condition worse than useless is not bringing to bear the energy and enterprise necessary for successful farming.

The great men of the professional and commercial worlds are largely recruited from the farm, but they depart while young, leaving, in too many cases, the straggling shoots that certainly requires hood out of an occupation that certainly requires as much, if not more, brains as any other business; that is, if one desires to make a real success of farming. These "shoots" often possess dormant possibilities which require a stimulus to awaken them, such as is given in an agricultural college. There must be something the matter when, out of all the farmers' sons in Canada, a paltry hundred new students gather yearly at the O. A. C. for the two-year course.

Re failures in business. To merely earn a living on a farm is not extremely hard; therefore, there is no need for absolute failure; but in either



Prepared to Ward Off Frost

saving money or increasing one's assets is where too many fail.

The farmers of Ontario are in the majority; therefore, they ought to rule. But what do they do in case of an election? Do they, irrespective of party, vote for the farmer candidate, who is truly interested in agriculture, or do they vote for the smooth-tongued lawyer? One glance at the occupations of the M. P. P.'s will show. The farmer has himself to blame for the props the Government puts under the business of the manufacturer or the distributor. Comparatively small amounts have been voted for agriculture in Ontario, but some farmers are grumbling at the terrible waste of money. They say it is largely a loss, as they are not benefited in return. They are indirectly benefited now, and would be directly if they took the trouble to read the bulletins published by the Department, or subscribe for and read a good agricultural journal, and benefit by the suggestions in them. Considerable has been written about cutting hay while green, and the benefits derived therefrom, yet one farmer near here, with 80 acres of hay, 40 of which is clover, had not started by July 12th.

While the farmer can do practically nothing to save his crops from the devastation of hail and frost, yet he can prepare, to a large extent, for such conditions as drouth, heavy rainfall, lightning, winds, etc. By judicious tillage of the soil, and by drainage, he can conserve enough of the winter and spring precipitation to tide the crops over anything but a long continued drouth. By drainage, he can also prevent crops being drowned out in wet weather. Lightning rods and insurance are good guards against loss from lightning; while reforestation of all waste lands would break the force of destructive winds, as well as more evenly regulating the precipitation throughout the year.

But you will say that drainage and improvements require help, and hired labor means money. Bulletin 174 of the Department of Agriculture should convince the skeptic that drainage would pay handsomely, even where hired help is expensive. Something is the matter, or all the young boys would not be going to the city.

Farmers, as a class, should follow more closely some motto, such as, "Enjoyment is the Chief End of Life." We are only going through this world once, and while on the journey we should be optimistic, and strive more for enjoyment. In this way, much of the drudgery of the farm would disappear.

As regards production, whatever may have been the condition in Hastings during the past few years, the value of the field crops in the Province was greater in the years 1905-1908 than it was in 1901-1904 by over \$1.12 per acre. That does not look much like one-half the former production. Middlesex Co., Ont. "PAN."

### Eradicating Dodder.

Though every precaution may have been taken to obtain dodder-free clover or alfalfa seed, yet a few seeds may have escaped notice, and may, therefore, be present. Thus, the field will be "spotted" with dodder. Root up everything on the "spots" and burn without moving, or remove and burn, if there is no danger of scattering seed. Get far enough out from the borders of the "spots" to make sure that all the dodder is destroyed. Small pieces of plants left continue to grow. Should a field have become generally infested, it is advisable to plow up the clover field before dodder seed is formed. Let the succeeding crop be a cultivated, non-leguminous one. Work out of the ground any dodder seeds that may be there, by encouraging them to sprout, and killing the seedlings by cultivation. Should seed have matured before the crop can be plowed under, burn the crop over, then plow and follow with a cultivated crop. Instead of either plowing or burning, shallow cultivation, followed by a cultivated crop kept thoroughly clean, may be resorted to. Here the plan is to cause the seeds to germinate and to destroy the seedlings. Any use desired may be made of the stand of clover on the ground, providing it is cut for hay, pastured or plowed under before the seed is formed. Stubble in the infested field must be plowed under without delay. It should be distinctly understood that dodder is the worst plant enemy that alfalfa has, and that every effort should be made to guard against dodder infestation; in fact, weeds of any description in alfalfa fields are decidedly detrimental to the production of the best crops.—From a Press Bulletin by G. M. Frier and Helen H. Henry, Assistants in Agricultural Extension, Purdue Experiment Station, Indiana.

Nothing but an attendance of a million will satisfy the management of the Canadian National Exhibition this year. And, with the Grenadier Guards Band, Aeroplanes, Model Military Camp, the greatest fireworks programme ever prepared, and a hundred other special attractions, they should get what they've long been after.

### Calgary Exhibition.

The Calgary, Alberta, exhibition, held the first week in July this year, was a very successful event. The live-stock exhibits in nearly every class were up to a creditable standard, and brought out in fine condition. The entries of cattle this year were 431, as against 256 in 1909; of horses, 775, as against 616. Last year swine entries were 177, this year 288, and entries of agricultural products increased this year over last by 375.

Clydesdale horses were judged by Albert Ness, of Howick, Que., except in the aged class, in which was a horse he had sold, P. M. Bredt, of Regina, placing the awards in that section, in which the order was: 1, Duncan Clark, Crowfoot, with Mainspring, by Ruby Pride; 2, Angus McIntosh, De Winton, with Orpheus; 3, J. M. Bruce, Lashburn, with Royal Blacon. Three-year-olds—1, Duncan Clark, with Bay Ronald; 2, James Clark, with Col. McQueen; 3, E. Hodges, Magrath, with Oak Leaf. Two-year-olds—1, John Clarke, Jr., Sir Norton; 2, A. C. Temmons, Prince Hugo. Yearlings—1 and 2, John A. Turner, Calgary, Middleman and Granite Prince; 3, J. M. Bruce, Tignuduin Baron. Champion—Turner's yearling, Middleman, by Medallion, out of Delectable Lass. For the best three sired by one stallion, the first award went to J. M. Bruce for the get of Baron's Pride, and second to Jas. Clark for the get of MacQueen.

Percherons are becoming increasingly popular in Alberta, and a good display was made at Calgary. In the class for stallions three years or over, the placing was: 1, Halifax, shown by Geo. Lane, Bar U Ranch; 2, Rosem, a gray, shown by Stooke & Amery, Crossfield; 3, Bruno, shown by J. B. Henshaw, High River. Stallions two years old—1, Hideo, W. B. Thorn, Alderside; 2, Henry, R. Reid, Crossfield.

Shires, Belgians and Suffolks were shown in small numbers.

Hackneys were judged by Andrew Laidlaw, Spokane, Wash. In the four-year-old stallion class there were five entries, and the awards were: 1, Seaham Mason, J. A. Turner; 2, Terrington Flashlight, Baxter-Reed Ranching Co.; 3, Netherhall, J. M. Bruce. The Baxter-Reed Co. were first and second with the three-year-olds, Firebrand and Envoy. In two-year-old stallions, W. E. Butler, Ingersoll, Ont., won with Manilus. The champion stallion was Turner's Seaham Mason.

### CATTLE.

Shorthorns.—In a strong showing of Shorthorn cattle, exhibitors were: W. H. English, Harding, Man.; Chas. F. Lyall, Strome, Jos. and R. W. Caswell, Saskatoon; J. M. Bruce, Lashburn, Sask.; Thos. Crosford, Airdrie; Jas. Wilson, Innisfail; P. M. Bredt, of Regina, made the awards. In the aged-bull section the placing was: 1, English, with Mikado, by Crusador; 2, Jos. Caswell; 3, J. M. Bruce. Bulls, 2 years old—1, Jas. Wilson, with Bonnie Favorite; 2, R. W. Caswell, with Jilt's Stamford. Senior yearling bull—1, and champion, English, with Lancaster Lad. Junior yearlings—1, Lyall, with Scotch Goods; 2 and 3, Bruce, with Jilt Lavender and Weston Hero. Bull calf—1 and reserve champion, R. W. Caswell, with Augusta Star; 2, English, with Roan Marshal; 3, J. Caswell, with Spicy's Shadow. Cow, three years or over—1, C. F. Lyall, with Village Blossom, bred by Harry Smith, Hay, Ont., and purchased at the Guelph sale in June for \$605; 2 and 3, English, with Red Bessie 2nd and Daisy Bell 3rd. Two-year-old heifer—1, English, with Poplar Park Queen; 2 and 3, R. W. Caswell, with Miss Belinda and Sylvan Star. Senior yearling heifer—1, R. W. Caswell, with Lady Empress 4th; 2, English, with Poplar Park Bess; 3, R. W. Caswell, with Sylvan Star 4th. Junior yearlings—1 and 2, R. W. Caswell, with Village Vanity and Vanity 13th. Heifer calves—1, C. F. Lyall, with Miss Nettie 11th; 2, R. W. Caswell, with Sylvan Star; 3, English. Champion female, C. F. Lyall, with Village Blossom. Herd, 1 bull and 4 females—1, English; 2, R. W. Caswell; 3, Chas. F. Lyall. Three calves under 1 year—1, English; 2, R. W. Caswell; 3, C. F. Lyall.

Aberdeen-Angus.—The exhibitors in this class were: Geo. G. Melson, Olds; Chas. C. Ellet, Strathcona; Lew Hutchinson, Duhamel. The awards for aged bulls were: 1, Melson, with Black Gaybawn. Bull, 2 years—1, Ellet, with Elm Park King 11th. Bull, 1 year—1 and 2, Melson. Yearling bull—1 and 2, Melson. Bull calf—1, Melson. 2, Hutchinson. Bull, any age, champion—1, Ellet, Elm Park King 11th. Cow—1, Hutchinson; 2, Melson. Heifer, 2 years—1, Hutchinson; 2, Ellet. Heifer, 1 year—1 and 2, Hutchinson. Heifer calf—1, Hutchinson; 2, Melson. Champion female—1, Hutchinson. Herd, bull and four females—1, Hutchinson; 2, Ellet.

Galloways.—The prizes were distributed between H. W. Beard, Gleichen, and W. E. Tees, Tees. The championship for bull went to Beard, and the female championship and first herd prize to Tees.

Holsteins.—There was strong competition in this class, the principal exhibitors being W. J. Tregillus and T. Laycock & Sons, of Calgary, and Michener Bros., Red Deer. G. H. Hutton, of Lacombe, made the awards in all the dairy classes. The Holstein winners were: Aged bulls—1, W. J. Elliot, Strathmore; 2 and 3, Tregillus, with Crown Chief and Delectable Kol Butter Box. Bull,

2 years—1, Isaac Bateman, Innisfail, with Mercedes Houwtje; 2, Laycock & Sons, with Sarcas-tic Bobs; 3, Michener Bros., with Sir Calamity Mechthilde De Kol. Bull, 1 year—1, Laycock & Sons, with Bonheur Sir Fayne; 2, Michener Bros., with Sir Hengerveld King; 3, Tregillus, with Pietje De Kol Butter Box. Bull calf—1, Michener Bros., with Sir Goldwin Kent De Kol; 2, Laycock & Sons, with Bonheur Daisy Sir Fayne; 3, Michener Bros., with Maple Hill Allan. (Champion bull—1, Bateman, with Mercedes Houwtje. Cow, three years and over—1, Michener Bros., with Hulda Wayne Johanna Lass; 2, Tregillus, with Brada Clothilde De Kol; 3, Michener Bros., with Lillian Abbekirk De Kol. Heifer, two years—1 and 2, Michener Bros., with Glossy Calamity Posch and Mercedes of Riverside; 3, Laycock & Sons, with Ringwood's Pride. Heifer, one year old—1, Tregillus, with De Kol Lady Fay; 2, Michener Bros., with Iva Abbekirk De Kol 2nd; 3, Laycock & Sons, with Aconeth Teake Colantha. Champion female—1, Michener Bros., with Hulda Wayne Johanna Lass, first-prize cow. Herd—1, Michener Bros.; 2, Tregillus.

Ayrshires made a strong class, and the awards were as follows: Aged bull—1, Barcheskie King's Own, J. Morrison Bruce, Lashburn, Sask.; 2, Stonycroft King, J. E. McDonald, Calgary; 3, Barcheskie Scotch Lad, J. J. Richards, Red Deer. Bull, two years—1, Barcheskie King's Way, A. H. Trimble & Son, Red Deer; 2, Netherhall Douglas, J. M. Bruce. Bull, one year—1, A. H. Trimble & Son; 2, Hobsland, J. M. Bruce; 3, Woodland Pride, J. J. Richards. Bull calf—1, Glen of Lone Spruce, A. H. Trimble & Son; 2, Guarantee's Rejected, J. J. Richards; 3, Duke of Ormstown, J. M. Bruce. Champion bull—Barcheskie King's Own. Cow, three years or over—1, White Rose of Springbrook, Trimble & Son; 2, Burnside Ivy Leaf, Trimble & Son; 3, Blue Bell of Ormstown, J. M. Bruce. Heifer, two years—1, Burnside Lady Nora, J. J. Richards; 2, Burnside Lena, J. M. Bruce; 3, Flossie, J. M. Bruce. Heifer, one year—1 and 3, A. H. Trimble & Son; 2, J. M. Bruce. Heifer calf—1 and 2, Trimble & Son; 3, Bruce. Heifer calf—1 and 2, Campbell & Son; 3, Bruce. Champion female, White Rose of Springbrook. Herd, bull and four females—1, Trimble & Son; 2, Bruce. Herd, bull and three females, bred by exhibitor—Trimble & Son.

Jerseys made a fine display, exhibitors being B. H. Bull & Son, Brampton, Ont.; R. Munro, Calgary, and W. J. Elliot, Strathmore. The Brampton herd included a number of high-class animals, and practically cleaned up the prize list in that class.

### Still Stands by Her Guns.

Editor "The Farmer's Advocate":

A few days ago I met a prominent dairyman, evidently one of your subscribers, who greeted me with the exclamation, "Why, Mrs. Hopkins, are you yet alive?" Then he went on to explain that he thought I must have succumbed under the "roasting" I received from your readers.

It is less those same readers he also filled with the same fear that I venture to raise my head a little, for not even the most bitter of them, I am sure, would want to have thus disposed of me, with my sin unrepented of, and unforgiven.

Naturally, I am a little shaken, for, when I wrote that memorable letter I said to myself, "Now, this will be like a minister preaching to a congregation that ought to be there. No one will take the least notice of it, for no one to whom it could apply reads 'The Farmer's Advocate.'" Well! Well! However, I am happy to assure you all that, although I have stood as target for the guns during the wordy battle of the past months, I have, nevertheless, greatly enjoyed the firing, and, womanwise, all the more so that every shot rang out, all unwittingly of the contestants, for my side of the contention; for, despite the fine imagination of those who willingly, or otherwise, exaggerated my statements, the basic claim of the argument was "The Rudity of Farm Life," and this claim, I maintain, has been fully proved by the letters published.

To begin with my letters, had I not been part and parcel of the very conditions to which I called attention, I could have expressed my sentiments in such a way as not to have aroused any bad-feeling; and to finish with those sent in reply, had not the writers been living proofs of those conditions, they could have made me feel my folly, and impressed me with their own superior wisdom, without descending to personalities altogether wide of the mark, coupled with rough words and general abuse, under the cloak of an incognito.

A number of correspondents have expressed the wish to hear from me again. I suspect it is with the same feeling that a mother has when she says, "Now, Harry, you can come and speak to me," meaning that just then is the proper time for him to let her know that her mode of persuasion has been both effectual and soothing, or else it will be yet the worse for him.

My dear friends, I wish I could do as Harry nearly always does say, "I'm very sorry, and I won't do it any more." But, instead of converting me to your own views, you have, by proving my assertions, confirmed me in mine. This much I will say, had all the letters been, as were a few



a' that." I bring this up because, in comparing city with country people, it is always in disparagement of the latter. There are well-to-do farmers and well-to-do city people, and just the reverse in both places.

Country people do not, I hope, come as near the fashion-plate ideal as city people do. Here is one reason: A farmer's wife is right at home with her husband's business. She knows just what he is doing every hour of the day (except when he is in town); she usually knows all his plans ahead. These, with her own work, so fill up her time and mind that she has very little of either to study fashions. Now, as a rule, city people know nothing of all this. Oh, husband is a merchant, a lawyer, or doctor, a tinker, a tailor, and that is about all they know, as long as the money comes in regularly. Do you see the point? What will she employ her brains at? Mrs. — has a new dress, I must have one; and the brains are set to work, and there is the result—a more fashionable dress, because her country sister did not spend her time that way.

Now, my country women, do not let anyone inoculate you with the idea that your life's work is to dress as your city sisters do. Do not do it. It will not pay. In these days, when you can buy such nice readymade suits, we do not need to bother, and can still make a fairly creditable appearance. No one likes to look shabby or noticeably old-fashioned; still, I do not think it shows good taste to dress in the extreme of fashion. Let country women be noticeable for their good sense, rather than their fine clothes.

"Then let us pray that come it may,  
As come it will for a' that,  
That sense and worth o'er a' the earth  
May bear the gree and a' that,  
For a' that and a' that,  
That man to man the world o'er  
Shall brothers be for a' that."

NANIE WEBSTER.

### Breed-study Contest: Announcement of Awards.

Thirty-one answers were received to the question, "What Breed is This Bull, and Why?" published in connection with the picture of a polled bull, appearing on page 1143 of our issue of July 14th. Thirty-one replies were received, scattered from Prince Edward Island to Alberta. The only correct answer was one of the three received on the first mail. It was from Irvine B. Whale, of Goldstone, Wellington Co., Ont., who surmised that the bull was a Red Poll, on the strength of the following expressed reasons:

"Because he is devoid of horns, long-bodied, low-set, heavy fore quarters; is not as deep-bodied nor as full at rear flank as is the Angus, which the picture somewhat resembles."

Twenty-two replies suggested Aberdeen-Angus; seven put him down as a Galloway, and one for a Shorthorn. The name of the bull is Davyson 297th, and he was champion at the Royal Show in England this year, being exhibited by Lord Cranworth. The photograph was sent us from England by a professional photographer, and we may as well confess that the idea of a contest was suggested to us by having been ourselves mistaken at first glance concerning the bull's breed. He does considerably resemble an Aberdeen-Angus or a Galloway, an impression borne out by the dark appearance in the picture, due to the exposed side of his body having been shaded when the picture was made, thus aggravating the tendency of red to show black in a photograph or half-tone. Scrutiny will show, however, that the bull's poll is not so sharp as that of a typical Angus, nor is he quite so low-set as a representative of the Scottish breed should be. All the same, the points of differentiation are not strongly marked, and no one who judges him an Aberdeen-Angus or a Galloway need discount his judgment. We believe this competition has been a real educator, and that all who took part will be well repaid for time and postage.

### J. Lockie Wilson Abroad.

The Superintendent of Agricultural Societies for the Ontario Department of Agriculture, J. Lockie Wilson, has returned from his tour to Britain and Europe, delighted with his observations, and charged with helpful suggestions. Britain is not decadent, and her farmers are fairly prosperous, though paying a rental of from £2 to £4 per acre. Their wheat yields range from 30 to 50 bushels per acre. England he found possessed by a plethora of wealth, industry, and intellectual activity. On the farms, high class cultivation and absence of weeds impressed Mr. Wilson, and also in the towns, the opportunities for developing a profitable trade for Ontario peaches and other fine fruits, and particularly tomatoes, which are wanted of a good size, with slightly thicker skins than possessed by some which have gone over, and packed in sawdust or peat. He saw peaches sold in London at from 9 to 18 pence each, and Canary Island tomatoes at 3 pence per pound. He was highly pleased with the horses of Belgium, which he thought would make fine animals for Canadian farmers.

### The Late William Rennie.

Canadian agriculture has lost one of its most prominent and influential personalities through the death, on Sunday, July 24th, of William Rennie, the well-known farmer and seedsman, who had been in poor health for some time, had a stroke of paralysis on May 23rd, and had been declining ever since. The late Mr. Rennie was born of Scotch parents in a log cabin in Scarborough Township, in 1835. His early days were spent on the homestead, which is now known as the "gold-medal farm" of Ontario. In 1860 he left the homestead and started farming for himself on the second concession of Markham, near Richmond Hill. Renting his farm in 1870, he moved to Toronto, and established the seed firm which bears his name, and which has now grown to large proportions, having branch stores at Montreal, Winnipeg and Vancouver. Finding it necessary to grow many of his own seeds, he again assumed charge of his farm, and, by improved methods, developed it, until, in 1884, in competition for the best-managed farm, he was awarded the first silver medal, his brother winning the gold medal. Mr. Rennie retired from business in 1889, leaving the seed establishment to his three sons. In 1893 he was asked by the late John Dryden, then Minister of Agriculture for Ontario, to take the position of Farm Superintendent at the Ontario Agricultural College. This he did, remaining there six years, putting into practice his ideas of short rotation and shallow plowing, so as to keep the upper layer of the soil well filled with humus. Upon retiring he published a book called "Successful Farming." He was prominently connected with Toronto Industrial Exhibition, and was a lover of Clydesdale horses, figuring as an importer. His farm used to be the center of some very interesting gatherings in connection with the Markham Farmers' Club. In 1862 he married Sarah Glendinning, who, with four sons, survives him.

### Making a New World's Milk Record

It seems to have remained for the Missouri College of Agriculture, at Columbia, Missouri, to raise and develop the champion dairy cow of all the world. Missouri Chief Josephine, a Holstein-Friesian cow, finished her six-months' test on July 18th, producing 17,008.8 pounds, an average of 93.4 pounds of milk daily for 182 days. This is equivalent to 46.7 quarts, or 11.6 gallons every day. Her highest record for one day was 110.2 pounds. This record is the more remarkable because no special preparation had been made for this test, and Josephine has done her full duty in the regular dairy herd of the University, having had five calves in five and one-half years.

Not only has this record smashed all previous world's records for milk production, but the per cent. of butter-fat is increasing daily, so that, barring accidents, this cow will undoubtedly produce more butter during a period of twelve months than any other cow that has ever been tested in the world.

This cow is but one of a number of remarkable cows owned by the University of Missouri, and maintained solely for the instruction of its students in agriculture, and for investigational purposes. Only twenty Jersey cows in the history of the world have produced more than 700 pounds of butter in one year. Five of these cows, or 25 per cent. of the total number, are owned and were bred by this Missouri institution. The College owns more than 300 pure-bred and registered animals, belonging to 17 distinct breeds. Josephine's record exceeds the present world's record for six months by 1,458 pounds.

### The Late H. S. Peart.

Death came last week to a highly esteemed and promising young professional horticulturist in the person of H. S. Peart, B. S. A., Director of the Horticultural Experiment Station at Jordan Harbor, Ont. Mr. Peart, who was in his thirtieth year, had been in charge of the Jordan Station for about three years, and had succeeded not only in establishing himself professionally in the confidence of the fruit-growers, but personally, as well. He was a son of Edwin Peart, a general fruit-grower of Nelson, near Burlington, Ont. He graduated from the Ontario Agricultural College in 1903, and was subsequently connected with the horticultural staff of the O. A. C. till accepting the position in the Niagara District. He was married two years ago to Miss Rollina Butchart, of Guelph, who, with one child, is left to lament his loss.

### The Western Crop.

The southern areas of the Western Provinces have this season been hit hard by the drought, which is proving very trying to newcomers. In many prairie sections, a careful observer, who has just returned from a tour to the coast, states that grass and wheat are a lamentable failure. In the Western States conditions are even worse. In the whole the wheat crop of the year was reduced to about half of last year in yield, the northern sections of all three Provinces being fairly good. One lesson of the year will be to consider more thoroughly, though more costly, systems of farming.

### Weed Seeds in Western Feed-stuffs.

For several years complaints have been made by farmers that large quantities of noxious weed seeds were being distributed through commercial feeding stuffs. The most serious complaints have been in regard to the ground or crushed feed manufactured from screenings from the elevators at Fort William and Port Arthur, and legislation aiming to prevent the distribution of weed seeds in this way has been asked for. Investigations by the Seed Branch in previous seasons have shown that a considerable proportion of the feeding stuffs on the market contain vital weed seeds. This spring the seed inspectors were instructed to collect samples of the feeding stuffs on the market in the different Provinces, in order to secure further information along this line. The samples have been analyzed, and the results are shown in the following table:

	Weed seeds per lb.		
	Max.	Min.	Av.
Bran, shorts and middlings .....	*17	1,704	0 246
Crushed grains .....	12	2,248	8 677
Meals of various sorts.....	15	18,768	16 1,802
Feed oats (unground).....	5	8,888	908 4,022

\*No samples analyzed.

### Coming Show Dates.

Regina, August 2nd to 5th.  
Saskatoon, August 9th to 12th.  
Edmonton, August 23rd to 26th.  
Sherbrooke, Que., Aug. 27th to Sept. 3rd.  
Canadian National Exhibition, Toronto, August 27th to September 12th.  
St. John, N. B., Dominion Exhibition, Sept. 5th to 15th.  
London, September 9th to 17th.  
Ottawa, September 9th to 17th.  
Charlottetown, P. E. I., Sept. 20th to 24th.  
Victoria, B. C., Sept. 26th to October 1st.  
Halifax, N. S., Sept. 28th to Oct. 6th.  
New Westminster, B. C., Oct. 4th to 8th.  
Maritime Winter Fair, Amherst, N. S., December 5th to 8th.  
Smithfield Club Show, London, Eng., Dec. 5th to 9th.  
Ontario Winter Fair, Guelph, Dec. 5th to 9th.  
Toronto Fat-stock Show, Union Yards, December 12th and 13th.

The New Brunswick Government has granted five hundred dollars in prizes, to be offered for fruit at the Fruit Exhibition to be held in St. John before the close of navigation on the St. John River, probably in the first week in November. Additional special donations from private persons in each county, to the extent of \$700, are being offered, making a grand total of \$1,200 in prize-money for this event. For particulars, address A. G. Turney, Secretary N. B. Fruit-growers' Association, Fredericton, N. B.

There has been a material decrease in Eastern Canada in apple prospects since blossoming time. Early varieties, particularly in Southern Ontario, show for a better crop than last year. The prospect for winter apples in Ontario is somewhat below that of last season at this time, while the outlook for Nova Scotia is for a reduction of one-half, compared with last year's crop. British Columbia has prospects for a crop considerably above the average.—Census and Statistics Monthly, under date of July 12th.

The make of cheese is showing the usual shrinkage for this season of the year, which, of course, has been accentuated by the exports of cream to the United States. Had it not been for these shipments, the production of cheese would have been much greater. Fresh contracts have been made, says the Montreal Trade Bulletin, for shipments of cream from new sections, and as soon as cooler weather sets in, the make is expected to show a greater decrease.

Reports from Guelph, Man., last week, stated that the black grass-hoppers, the most destructive pest ever known in the Northwest, had made their appearance in swarms within the past few days, and were attacking garden stuff. They came from the Decatur, and appeared to be headed north.

The Royal Commission on Technical Education, under the chairmanship of Dr. Jas. W. Robertson, have begun their inquiry in Nova Scotia, and will work westward through Canada before going to other countries for information.

On most farms supplied with windmills and other septic tanks and sanitary sewage may be cheaply provided. Such simple systems will take care of all the horse sewage and make the home comfortable and sanitary.

Farmer's homes may be provided with many of the modern conveniences that city people enjoy.

Gossip.

FOOT-AND-MOUTH DISEASE IN ENGLAND.

Reports have recently been received by the Live-stock Commissioner at Ottawa, regarding an outbreak of foot-and-mouth disease in Yorkshire, England. Cablegrams have been sent seeking authoritative confirmation of the rumor. Should it prove true, Canada, which has been free from the disease for years, will have to prohibit the importation of cattle from the infected areas.

Official records of 161 Holstein-Friesian cows were accepted by the American Holstein Association, from May 16th to June 15th, 1910. This herd of 161 animals, of which over one-half were heifers with first or second calves, produced in seven consecutive days, 66,256.1 lbs. of milk containing 2,261.316 lbs. of butter-fat, thus showing an average of 3.41 per cent. fat. The average production for each animal was 411.5 lbs. of milk, containing 14.045 lbs. of butter-fat, equivalent to 58.8 lbs. or over 28 quarts of milk per day, and 16.4 lbs. of the best commercial butter per week.

PRESENTATION TO WILLIAM MONTGOMERY.

On July 8th, William Montgomery, of Banks, Kirkcudbright, Scotland, was the recipient from his numerous friends of a complimentary address and painted portraits of himself and his wife, with a silver necklace and diamond pendant for Mrs. Montgomery, over eighty gentlemen, and nearly an equal number of ladies being present at the banquet in the Town Hall. There were no less than 550 subscribers to the presentation fund, and the total sum realized was \$3,305, including \$50 from the Clydesdale Horse Association of Canada, who sent a cordial official letter eulogizing the great Montgomery firm for their enterprising spirit displayed in the improvement and dissemination of the breed of Clydesdale horses. Among those present was Robert Ness, of Howick, Quebec, who had a very cordial reception as a spokesman for Canada, and he, in return, paid a well-deserved tribute to the guest of the evening, and to his estimable mother, expressing the opinion, which was cordially endorsed by the company, that her sons owed much of their success to her. Over twenty years ago, a similar function was held in the Town Hall, Castle Douglas, on which occasion the recipient was the elder brother, Andrew Montgomery. The two brothers are known throughout the world as the partners of the firm of A. & W. Montgomery, Netherhall and Banks, Kirkcudbright.

PERCHERONS FOR WESTERN CANADA.

Too many are inclined to think that in Canada there are no draft horses, except Clydesdales and Shires, and most breeders of these two excellent kinds think that there never will be any other breeds of drafters in this land. But the truth is, that there are others here now, good ones, too, and a good many of them. For several years the Quebec Government has been importing Belgians into that Province. Already this year, they have made an importation of about fifteen stallions. Records are kept of these horses, and of their progeny. New Brunswick, too, brought out some Belgians a few years ago.

But the Percherons are making the greatest bid for popularity of the new breeds. They have most friends in Western Canada, although they are to be found here and there through all the Provinces. It may be a surprise to many readers to know that the largest private breeding farm for Percherons in the world is owned in Canada, being the property of George Lane, Calgary, Alberta. For years, Mr. Lane has been buying the best that France produces, and transferring them to his breeding plant in the West. He has been the most conspicuous buyer at the competition of the Percheron Society of France this year. The competition was the largest and finest yet held, 187 stallions and 200 mares being exhibited. Mr. Lane made a purchase of 73 mares and 25 stallions, which, for size, type, quality

and breeding, form the most excellent single shipment that has ever left France.

Seed wheat of the registered Dawson's Golden Chaff variety, selected for eleven years, is advertised for sale by C. R. Goss, Heidelberg, Waterloo Co., Ont.

The dates of the Russell (Ont.) Fair have been changed to October 6th and 7th, 1910, to avoid clashing with other fairs.

Among the shipments of Clydesdales from Glasgow for Canada, on July 9th, were eight for John Miller, Jr., Ashburn, Ont., five for John McAllan, Hampton, Ont., five for Hugh Greenlees, Bowmanville, eight for Joseph R. Eadie, Vars, Ont., and two for William Carruthers, Tiverton, Ont.

J. W. Bart, of Coningsby, Ont., near Erin Station, on the Elora branch of C. P. R., offers for sale some nice yearling Aberdeen-Angus bulls. Also the imported Clydesdale stallion, Star of Roses (11351), a bright bay son of King of Roses, by Rosemount, by Prince of Albion, by Prince of Wales (673), dam Myse, by Darnley (222). The dam of Star of Roses, Tiara (9500), was sired by the famous horse, Lord Dunlop (2264). Star of Roses is described as a horse of fair size and excellent quality. He has been in service for seven years in the same district, and will be sold at a reasonable price, or will be exchanged, together with some Angus cattle, for good Northwest property.

A. S. Turner & Son, Ryckman's Corners, Ont., three miles from Hamilton, breeders of Ayrshire cattle, write: "We have made some very successful sales, thanks to 'The Farmer's Advocate,' as it brings results every time. We have four spring heifer calves for sale, also one young bull, extra fine in quality, dam full sister to Canadian Princess, who holds the 3-year-old world's record. Have also twenty-five cows freshening before the New Year, all heavy milkers of great milking strain, and will book orders for calves of either sex. Sire of all calves, Pearlstone of Glenora—18510—whose granddam, Edith of Lessnessock, gave 13,000 lbs. of milk in Record-of-Performance test at 13 years of age. They also have added a new stock bull to the herd, Lessnessock Florist King (imp.). He is of great dairy type, and promises to be a good one."

CENSUS OF AGRICULTURE.

The next Census of Agriculture will be taken under date of 1st June, 1911.

The area, product, and value of field crops harvested in 1910 will be enumerated for fall wheat, spring wheat, barley, oats, rye, corn for husking, buckwheat, beans, peas, flax, mixed grains, hay and clover, alfalfa or lucerne, corn for forage, other forage crops, turnips, mangolds, sugar beets, other field roots, tobacco and hops, and grass seed, red clover seed and alsike clover seed, will be enumerated for product and value.

Grain and other field crops for the harvest of 1911 will be taken by areas only, as none of these crops will be ripe at the taking of the census. The products of these crops will be gathered later in the year, from the reports of correspondents.

Animals and animal products, also under the head of agriculture, will include the number of horses three years old and over, horses under three years, milch cows, other horned or meat cattle, sheep, swine, turkeys, geese, ducks, hens and chickens, and hives of bees held or owned by each person at the date of the census on 1st June of 1911.

The number of horses, milch cows, other horned meat cattle, sheep, swine and poultry sold in 1910, will be recorded, as well as the wool, milk, homemade butter, homemade cheese, eggs and honey products of the year, and the quantities of milk and cream sent to factory or can.

Pure-bred animals registered, or eligible for registration, which are owned at the time of taking the census, will be enumerated for horses, cattle, sheep and swine. Their number will also be counted with all other animals.

QUESTIONS AND ANSWERS.

1st.—Questions asked by bona-fide subscribers to 'The Farmer's Advocate' are answered in this department free.

2nd.—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer.

3rd.—In Veterinary questions the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

4th.—When a reply by mail is required to urgent veterinary or legal enquiries, \$1.00 must be enclosed.

Veterinary.

SPINITIS.

Colt, eight months old, suddenly became stiff in head and neck and walked like a drunken man, and, if moved quickly, was liable to fall. I applied mustard over loins and gave her saltpetre, gentian and nuxvomica. She is somewhat better, but does not walk properly yet.

J. P. P.

Ans.—This is partial paralysis, due to disease of the spine. Purge with 8 ounces raw linseed oil. Keep quiet as possible, and give 30 grains of nuxvomica, three times, daily. It is probable she will improve slowly, but some cases do not make a complete recovery. V.

PERIODIC OPHTHALMIA.

Horse is now five years old. He was castrated at three years of age, and since then his eyes have not seemed to be right. During this summer one eye became sore; had a watery appearance, and he kept it partly closed for a few days. It got better, and then it sore again for a few days.

E. T.

Ans.—The trouble with the eye is not due to the operation mentioned. The disease is called periodic or specific ophthalmia. It is a constitutional disease, and its appearance can neither be avoided nor anticipated. All that can be done is treat each attack by keeping as comfortable as possible in a partially darkened stable, bathing the eye well, three times daily, with hot water, and, after bathing, putting a few drops of the following lotion into it, viz.: 10 grains sulphate of zinc, 20 drops fluid extract of belladonna and 2 ounces distilled water. In most cases, blindness from cataract appears after several attacks. V.

Miscellaneous.

BUSINESS ADDRESSES.

Please give the names and addresses of one or two companies that sell moving-picture machines.

W. H. H.

Ans.—We cannot devote our columns to the publication of business addresses. Once started, the practice would develop until it became an abuse. Consult a business directory. Your local merchant or banker will doubtless accommodate you.

SNOUT BEETLES IN GRANARY.

My granary is numerously infested with insects resembling a louse, dark brown color; grain is hot. Is there any way of destroying or killing them without injuring the grain for feeding purpose?

W. C.

Ans.—The granary insect complained of is probably a small Snout-beetle (or weevil), which we often find infesting stored grain. Without seeing a specimen, it is not possible to be quite sure as to the species referred to. However, pests of this kind may be got rid of by fumigating the grain with bisulphide of carbon, the usual amount is two ounces to a hundred pounds of grain. The liquid should be poured upon the grain, or placed in saucers on top of it, and then the bin should be covered up as tightly as possible and left for forty-eight hours. By that time the insects will be killed. Great care must be taken not to have any fire or light near, as the fumes of the material are very inflammable and explosive. After the fumigation has been completed the grain should be taken out and exposed to the air. In any case, it would be well to have it winnowed before feeding to stock, to get rid of the beetles. If your correspondent would send specimens, we could be more definite. CHARLES J. S. BETHUNE.

HAMPSHIRE LAMBS WANTED.

Please inform me where there are any pure-bred Hampshire ram lambs for sale? T. S.

Note.—Advertisers, attention!

NOXIOUS WEEDS.

1. Is there a law in Ontario prohibiting the allowing of noxious weeds going to seed?

2. If so, how would a man proceed? There are some people around here very careless; Canada thistles enough to seed a township blowing all over.

Ans.—1. Yes; Revised Statutes of Ontario, 1897, Chapter 279, the Act to prevent the spread of noxious weeds, and of diseases affecting fruit trees; the Consolidated Municipal Act, 1903, empowering municipal councils to pass by-laws for preventing the growth of Canada thistles and other weeds detrimental to husbandry, and for compelling the destruction thereof; the Ontario Statute of 1904 (Chapter 27), to amend the law respecting the destruction of noxious weeds; the Ontario Railway Act (1906), 6 Edw. VII., Chap. 30, Sec. 105. See especially Sec. 2 of the Revised Statute above referred to.

2. By laying an information, or causing one to be laid, before a Justice of the Peace. See Sections 9, 10 and 11 of the Revised Statutes.

TRADE TOPICS.

WINDMILL AND WATER-SUPPLY CATALOGUE, FREE.—One of the neatest things in catalogues we have seen for some time, is General Catalogue No. 26, issued by the Heller-Aller Co., manufacturers of Baker windmills, steel towers, tanks, pumps, cylinders, and water supplies of all kinds. While this is supposed to be an agents' catalogue, the company advise us that they would be pleased to mail a copy to any customer about to purchase a water system. It is neatly bound, indexed, and contains over 200 pages. Write for a copy to the Heller-Aller Co., Windsor, Ont.

The Western Fair, at London, Ont., as a live-stock exhibition, is becoming more popular each year. The classification for the different breeds of live stock is well arranged in the prize list, and the prizes offered are extra good this year. In addition to the cash prizes, there are a number of good specials. The cash prizes for cattle, sheep and swine are all increased, and a large entry is expected. The rule withholding third prize when no competition was offered has been withdrawn, and all prizes may be awarded if the animals are worthy. Medals will be given in some sections in the sheep department. The speed department and attraction programme will be of particular interest. The programmes are being printed now, and will soon be ready for distribution. All information will be given on application to the Secretary.

MARKETS.

Chicago.

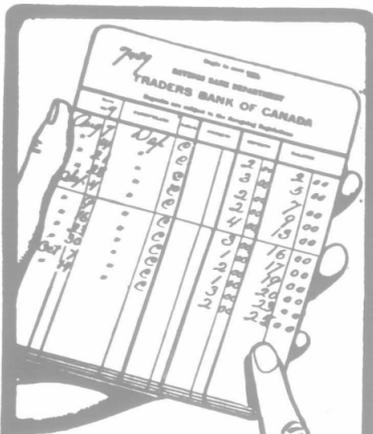
Cattle.—Texas steers, \$3.60 to \$5.70; Western steers, \$3.50 to \$4.50; stockers and feeders, \$4.15 to \$6.40; cows and heifers, \$2.65 to \$6.65; calves, \$6.75 to \$8.75.

Hogs.—Light, \$8.70 to \$9.10; mixed, \$8.30 to \$8.95; heavy, \$8 to \$8.75; rough, \$8 to \$8.20, good to choice heavy, \$8.20 to \$8.75; pigs, \$8.75 to \$9.10; bulk of sales, \$8.40 to \$8.45.

Sheep and Lambs.—Native, \$2.60 to \$4.25; Western, \$2.50 to \$4.25; yearlings, \$4.10 to \$5.50; lambs, native, \$4.50 to \$7.40, Western, \$4.50 to \$7.50.

British Cattle Markets.

Liverpool quoted small cattle in good demand last Saturday, practically all the stock changing hands. States steers, 15c. to 15½c.; Canadians, 14½c. to 15½c., and fed ranchers, 13½c. to 14c. Deptford reported last week's receipts at 167 States cattle and 238 Canadian cattle from States ports, 819 Canadian cattle coming direct. Canadians, 15½c. a pound.



**Regular Savings Count Up**

when deposited in the Traders Bank. Regular deposits of One, Two or Three Dollars grow into tens and hundreds, more quickly than larger ones made only occasionally. It is a mistake to wait as some do, till they have accumulated a good-sized amount. Get the habit of depositing something, even if only a dollar, every week or every fortnight.

**THE TRADERS BANK OF CANADA**  
Capital and Surplus \$6,550,000

**Toronto.**

**LIVE STOCK.**

At West Toronto, on Monday, 25th, receipts of live stock amounted to 162 cars, comprising 3,400 cattle; quality of cattle generally good; trade slow up to noon; prices 25 cents per cwt. lower on all cattle. Exporters, \$6 to \$6.85; picked butchers', \$6.25 to \$6.50; good, \$5.75 to \$6; medium, \$5.25 to \$5.70; common, \$4.50 to \$5; cows, \$3.50 to \$5; milkers, \$35 to \$65; calves, \$6 to \$7.50 per cwt. Sheep, \$3.50 to \$4.25; lambs, \$7.65 to \$8.10 per cwt. Hogs—\$9.40, f. o. b. cars at country points, and \$9.75, fed and watered.

**REVIEW OF LAST WEEK'S MARKETS**

The total receipts of live stock at the City and Union Stock-yards for last week were as follows:

	City.	Union.	Total.
Cars	162	164	326
Cattle	2,251	2,629	4,880
Hogs	2,783	2,083	4,866
Sheep	2,482	619	3,101
Calves	491	143	634
Horses	1	160	161

The total receipts of live stock for the two yards for the corresponding week of 1909 were:

	City.	Union.	Total.
Cars	173	212	385
Cattle	2,093	3,790	5,883
Hogs	2,726	791	3,517
Sheep	4,473	571	5,044
Calves	685	286	971
Horses	2	108	110

The above figures show a total decrease of the combined receipts at the City and Union Stock-yards for the week of 29 carloads, 1,003 cattle, 1,943 sheep, 337 calves; but an increase of 1,349 hogs, and 51 horses, in comparison with the corresponding week of 1909.

It will be seen that receipts of live stock for last week were not as large as usual. The quality of cattle at the Union yards was generally good, because it is there the exporters are sold, and as the bulk of them come from Western

Ontario, where the bulk, as a rule, are better bred and fed. At the City yards, the quality of the cattle, as a rule, was common to medium. There was a steady trade all week, at about the same prices for good cattle, while the common to medium exporters sold at about 10c. per cwt. lower.

Exporters.—Export steers for the London market sold at \$6.80 to \$7.15; heifers, \$6.50 to \$7; bulls, \$5.50 to \$5.60. For Liverpool, steers sold at \$6.35 to \$6.85; heifers, \$6 to \$6.50; bulls, \$5 to \$5.50.

Butchers'.—Prime picked lots sold at \$6.75 to \$6.85, and one lot, \$6.90; loads of good, \$6.25 to \$6.50; medium, \$5.75 to \$6; common, \$5 to \$5.75; cows, \$3 to \$5.25, and a few extra quality cows sold up to \$5.50 and \$5.60, and some extra butcher bulls sold as high as \$5.90, and the run of butcher bulls was from \$4.50 to \$5.25 and \$5.50.

Stockers and Feeders.—There were few of either class on sale, and prices were about the same. Steers, 850 to 1,000 lbs., \$4.75 to \$5.25; steers, 750 to 800 lbs., \$4.25 to \$4.75; stockers, \$3.50 to \$4.25.

Milkers and Springers.—Moderate receipts of milkers and springers sold at \$40 to \$65 each, with a few at \$70, and one choice Holstein at \$85.

Veal Calves.—Receipts were moderate all week, with prices firm, ranging from \$3 to \$7.50 per cwt., and one lot of six calves that had suckled the mothers, sold at \$96 for the lot, or \$16 each.

Sheep and Lambs.—Heavy export, fat ewes, sold lower, at \$3.50 to \$4.25; rams, \$3 to \$3.50 per cwt.; lambs sold from \$7.50 to \$8.75 per cwt.

Hogs.—The market for hogs at the end of the week advanced very materially, owing to light deliveries. Selects, fed and watered, sold at as high as \$9.90, and \$9.50, f. o. b. cars at country points.

Horses.—At the Union Horse Exchange last week there was a fair trade. Manager Smith reported sales of three carloads to the Eastern Provinces, and two carloads to the Northwest. The principal demand is for choice heavy drafters, with a moderate demand for general-purpose and a few drivers. These stables did a good trade by private sales, and shipped many small consignments to local points in Ontario. Mr. Smith is quite hopeful, as the prospects for a good trade are brighter than for some time. Prices were unchanged, but firm.

**BREADSTUFFS.**

Wheat.—No. 2 Ontario white or mixed winter wheat, \$1.08 to \$1.10. Manitoba wheat—No. 1 northern, \$1.22; No. 2 northern, \$1.20, track, lake ports. Rye—No. 2, 68c. Peas—No. 2, 70c. to 71c., outside. Buckwheat—No. 2, 51c., outside. Barley—No. 2, 52c. to 53c.; No. 3X, 50c. to 51c.; No. 3, 45c. to 47c., outside. Oats—Manitoba oats, No. 2, 45c.; No. 3, 44c., lake ports; Ontario, No. 2, 38c., outside. Corn—No. 2 yellow, 66½c.; No. 3 yellow, 65½c., at Midland or Collingwood; No. 3 yellow, all rail, 71c. at Toronto. Flour—Ontario winter wheat, ninety per cent. patents, \$4.25, for export. Manitoba flour—Prices at Toronto: First patents, \$6.20; second patents, \$5.70; strong bakers', \$5.50.

**HAY AND MILLFEED.**

Hay.—Baled, in car lots, on track, Toronto, No. 1 old, \$16; No. 2, car lots, old, \$11 to \$13.50; new, No. 1, \$12.50 to \$13.50.

Straw.—Baled, in car lots, on track, Toronto, \$7.50 to \$8.

Bran.—Manitoba bran, \$20 per ton; shorts, \$22, track, Toronto. Ontario bran, \$20, in bags. Shorts, 50c. to \$1 per ton more.

**COUNTRY PRODUCE.**

Butter.—Receipts were not as large as usual; prices for the best grades were firm. Creamery pound rolls, 24c. to 25c.; creamery solids, 22c. to 23c.; separator dairy, 21c. to 22c., store lots, 19c. to 20c.

Eggs.—Receipts continue to be heavy, with prices easy, at 20c.

Honey.—Old honey is a thing of the past, and new has not been offered up to present.

Beans.—Market steady to firm. Primes, \$2 to \$2.10, and hand-picked, \$2.15 to \$2.25.

Potatoes.—Old Ontario potatoes sold at 25c. per bag, by the car lot, on track, Toronto.

New Potatoes.—American-grown, car lots, on track, Toronto, \$2.20 to \$2.30 per barrel.

Poultry.—Spring chickens are plentiful and cheaper, at 16c. to 18c. per lb., alive; old hens, 12c.; old roosters, 10c.; turkeys, 11c.; pigeons, \$1.25 per dozen.

**HIDES AND WOOL.**

E. T. Carter & Co., 85 East Front street, have been paying the following prices: No. 1 inspected steers and cows, 9½c.; No. 2 inspected steers and cows, 8½c.; No. 3 inspected steers, cows and bulls, 7½c.; country hides, 8c. to 8½c.; calf skins, 11c. to 13c.; horse hides, No. 1, \$2.75; horse hair, per lb., 30c.; tallow, per lb., 5c. to 6½c.; lamb skins, 20c. to 25c. each; wool, unwashed, 13c. to 14c.; wool, washed, 18c. to 20c.; wool, rejections, 15c.

**FRUITS AND VEGETABLES.**

On account of the railway strike, receipts were light, with prices firmer in some instances, as follows: Blueberries, 12-quart baskets, \$1.25; cherries, cooking, \$1 to \$1.25; currants, black, basket, \$1.25 to \$1.65; per quart, 15c.; currants, red, basket, 65c. to 85c.; gooseberries, basket, 75c.; raspberries, 12c. to 13c. per quart box; beans, per basket, 50c. to 60c.; cabbage, per crate, \$1 to \$1.25; cucumbers, per hamper, \$2.25; onions, crate, \$2.50; green peas, basket, 40c.; watermelons, 30c. to 40c. each.

**Montreal.**

Live Stock.—Shipments from the port of Montreal for the week ending July 16th, amounted to 2,875 head, against 1,901 head the previous week. Offerings on the local market were of a rather inferior quality, for the most part, and the range of prices paid showed a decline. The first large shipment of Northwest ranchers—about ten carloads—was on the market. A few choice steers sold at 6½c., and even a fraction higher, fine being about 6½c. and good about 6c., medium being 5½c. to 5½c. or 6c., and common 4c. to 5c. Cows ranged from 3½c. to 5c. per lb., bulls from 4c. to 6c. There was no change in the market for sheep and lambs, sheep selling at 3½c. to 3½c. per lb. for yearlings, and spring lambs being \$1 to \$6 each. Calves sold at \$3 to \$6 each for common stock, and 5½c. to 6c. per lb. for choice. The market for hogs was the firm feature, these advancing fractionally to 10c. and 10½c. per lb., for selects, weighed off cars. Some heavy hogs sold at 9c.

Horses.—Dealers are having a hard time getting horses in the country to supply the demands of customers. Some buyers think that prices are advancing, while others are not disposed to admit that they are, and repeat the following quotations: Heavy draft, 1,500 to 1,700 lbs., \$275 to \$350 each; light draft, 1,400 to 1,500 lbs., \$225 to \$275 each; light horses, 1,000 to 1,100 lbs., \$100 to \$175; inferior animals, \$50 to \$100 each; and fine saddle and carriage animals, \$350 to \$500 each.

Dressed Hogs.—Sales at 13½c. to 14c. per lb. for choicest.

Potatoes.—New Canadian stock is arriving, and interest in old stock is small, although some was still quoted last week at 55c. to 75c. per 90 lbs., according to quality. Dealers are quoting Canadian new stock at \$3 to \$3.25 per barrel.

Eggs.—The market for eggs in the country has declined considerably, the quality of the stock having deteriorated. One merchant declared he was buying most of Toronto, at 14½c. per dozen, for stock gathered. Others reported 15c. to 16c. according to location. This stock was selling here at 17½c. to 18c. per dozen, while selected eggs sold at 22c., and No. 1, candled at 19c. to 20c. By Monday, owing probably to the Grand Rapids strike, prices had advanced to 15½c. in the country, and 18½c. to 19c. here.

Butter.—Fancy stock was quoted at 23½c. per lb., in a rolling way, with in a wholesale way, dealers were asking about 23c. Fine steers and cows sold at 22½c. to 22½c. per lb. Steers and cows from the port of Montreal are now selling at 22c. season, against 24½c. the same date of 1909.

**The Canadian Bank of Commerce**

affords to farmers and others every facility for the transaction of their banking business.

Accounts may be opened by mail and moneys deposited or withdrawn in this way with equal facility.

SALES NOTES will be cashed or taken for collection.

Branches throughout Canada, including Toronto, Hamilton, Montreal, Charlottetown, New Glasgow, and Truro.

Cheese.—Shipments of cheese from the port are now about 5,000 boxes in excess of those for the corresponding period last year, being 605,000 boxes to date. Prices last week continued steady here, being in the vicinity of 10½c. to 10½c. for Quebecs and Townships, and 11c. to a fraction more for Ontarios.

Grain.—The market for oats continued to advance. No. 2 Canadian Western oats were quoted at 45½c. to 46c. per bushel, ex store, carloads, Montreal, No. 3 oats, 44½c. to 45c.; No. 3 barley, 54c., and No. 4, 50c.

Flour.—Still advancing with the advance in wheat. Prices for Manitoba first patents, \$6.30; seconds, \$5.80, and strong bakers', \$5.60; Ontario patents, higher, at \$5.40 to \$5.50, and straight rollers, \$5.10 to \$5.20.

Feed.—An advance took place in the market for bran lately, Ontario bran being quoted at \$20.50 to \$21 per ton, in bags; middlings, \$21 to \$22; pure grain mouille, \$32 to \$33, while mixed mouille was \$25 to \$25 per ton. Manitoba bran was \$20, and shorts \$21 per ton. Cotton-seed meal is quoted at \$27 per ton.

Hay.—\$14.50 to \$15 per ton for No. 1 hay; \$13.50 to \$14 for No. 2 extra; \$12 to \$12.50 for No. 2; \$10.50 to \$11 for clover mixed, and \$9 to \$10 for clover.

Hides.—Markets are poor all over the world, and prices have declined here in spite of improved quality. Prices were 1c. down last week, and were expected to be another cent down this week. Uninspected hides were 8½c. per lb., Montreal, and 8c. this week; No. 3 hides were 9c.; No. 2, 10c., and No. 1, 11c., and 1c. less this week. Calf skins were also a cent down, at 12c. for No. 2, and 14c. for No. 1. Lamb skins were still 25c. each, and horse hides, \$1.75 to \$2.50 for Nos. 2 and 1, respectively. Tallow 1½c. to 5c. per lb. for rough, and 5c. to 6c. for rendered.

**Cheese Markets.**

Peterborough, Ont., 10 5-16c. Madoc, Ont., 10½c. Sud. Brockville, Ont., 11c. Kingston, Ont., 10½c. and 10 15-16c. Vankeels Hill, Ont., 10 13-16c. Winchester, Ont., white, 10 13-16c.; colored, 10½c. Sud. Ottawa, Ont., white, 10 13-16c.; colored, 10½c. Brantford, Ont., 10½c. Sud. Innesport, Ont., 10½c. Picton, Ont., 11c. Kemptville, Ont., 10 13-16c. Cowansville, Que., 10½c. to 10½c. St. Hyacinthe, Que., 10½c. to 10½c. Chicago, Ill., daisies, 15½c. to 16c. 2½c. 1c. to 15½c., young American, 15c. to 16c. Longhorns, 16c. to 17c. 1c. 1c. to 10½c.

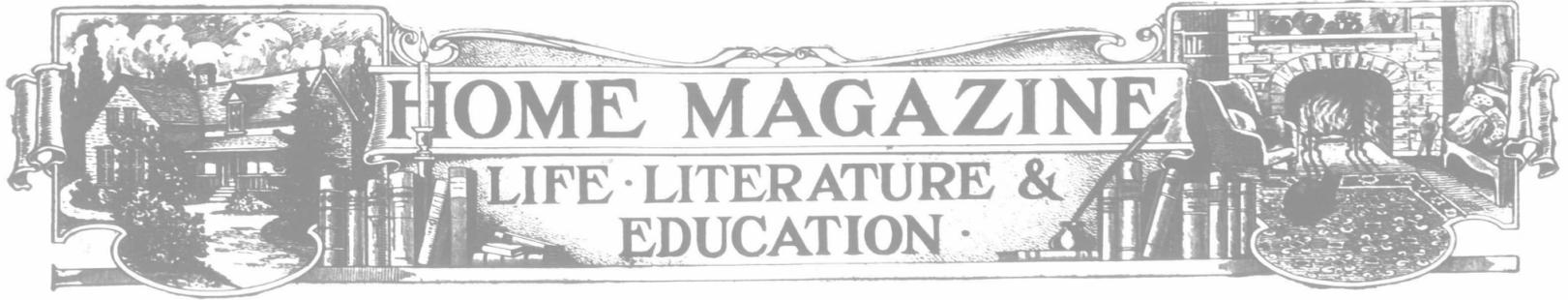
**Buffalo.**

Cattle.—Prime steers, \$7.00 to \$8.00; heavy steers, \$7.50 to \$7.75; butchers', \$5.25 to \$7.25; cows, \$4.50 to \$7.50; calves, \$3.50 to \$5.75; hogs, \$9.25 to \$9.50; sheep, \$3.25 to \$5.00; stock lots, \$1.25 to \$1.50; fresh cows, and calves, \$1.50 to \$2.00.

Veal, \$7.00 to \$8.00.

Wool, \$1.25 to \$1.50.

Butter, \$2.25 to \$2.50; cheese, \$1.50 to \$1.75; eggs, \$1.75 to \$1.85; tallow, \$1.75 to \$1.85; lard, \$1.75 to \$1.85; honey, \$1.75 to \$1.85; maple syrup, \$1.75 to \$1.85; molasses, \$1.75 to \$1.85; corn, \$1.75 to \$1.85; wheat, \$1.75 to \$1.85; flour, \$1.75 to \$1.85; hay, \$1.75 to \$1.85; straw, \$1.75 to \$1.85.



Ordinarily, the rural population is not deeply interested in strikes, but when a railway strike occurs, there is brought home to it the tremendous power of organized union: for the railway, sending its ramifications like great feelers over the country, with towns and hamlets clustering to it, and the commodities which farmers have to sell finding by it their outlet, comes very close to the people, and any disorganization of it is quickly enough evident. Motionless cars, laden to the roof with freight, at station or side-track; freight sheds piled to the overflowing; holiday traffic disarranged; the difficulty of getting produce to its market—these are signs to be easily read, and the farming population begins to feel that even it has been touched by this thing that has happened.

Individual feeling will go either with men or with railway, according as the one or the other has been believed—or, possibly, as prejudice tends towards labor or capital—but it is not always that the outside world can pronounce with authority; it cannot easily lay finger upon all the wires in connection with such disturbances.

In the meantime, the general public can only hope that a satisfactory arrangement may soon be accomplished, and regret that such demonstrations as occurred last week at Belleville should have taken place in orderly Canada. A hundred men to two seems rather overwhelming odds, the hundred men at that in ambush, the two taken unawares; and the fact that stones were thrown through the windows of the hotel into which the battered and bruised victims were carried, only proves that even in the most civilized of our towns and cities there is a hoodlum element that has no idea of honor, or even common decency. To kick a man when he is down, is bad enough, but to pummel the good Samaritan also is surely neither smart nor politic. It speaks well for the Belleville trainmen that no suspicion was directed against them, but only against their so-called "sympathizers,"—more likely a rabble of the species that sees "fun" in any dog-fight.

**In the Little Ugly Brick Building.**

(Concluded.)

The "Little Ugly Brick Building down the road" may not be very well equipped with teaching facilities for nature study and agriculture in its immediate environment. The yard may be hard and stony, and badly in need of sufficient humus. The fence may be crumbling away of old age, the gate so unstable as to admit the first wandering cow desirous of going in where she has no right to be. Nevertheless, as our bulletin notes, "For the teaching of agriculture, the rural-school teacher has provided for his use a costly and complete laboratory. It is as large as the school district, and every farm is a part. And what a wonderfully interesting laboratory it is! It is filled with living, growing things, as well as with forms which, at first, may, because not understood, seem less attractive."

And now do not tell us that this laboratory will not be made use of by the right sort of teacher, the one whom, if you have found her, you should "keep" at all risks short of a chance who threatens you with a double-barrelled gun. Will the children be any the less interested in the wonders of the country because this

teacher shows them that the "ugly" caterpillar—no, the "wonderful" caterpillar, when one understands it—may develop into the beautiful moth, emerging from its queer cocoon in a strange resurrection? Or that the frog goes through a series of marvellous changes in its development from the egg to the full-grown croaker on the lily pad? Or that the butterfly sucks its nectar from the depths of the flower by a long tube which it inserts, then rolls up, like the main-spring of a watch, when it has finished? These bits of information may not help the child to make a better farmer, but knowing such things will give him a greater interest in and love for "the country."

But something may be done even at the schoolhouse. "With a homemade seed-tester," the bulletin goes on, "a quantity of soil, some simple apparatus that may be purchased at small cost, or, better still, made by the boys and girls; and the plants that grow in the school district—the weeds, the flowers, and the cultivated crops—much good work can be accomplished."

Then, there are helpful books. "Not only are there good text-books on agriculture, but there are hundreds of bulletins issued by boards of agriculture, agricultural colleges, and the Department of Agriculture, these bulletins being for free distribution." (A very insignificant charge is made for American bulletins sent into Canada—Ed.)

"There are many things that every teacher who has to do with country life should know; there are some things that the best rural teachers will know. The best educators in-

make a simple seed-tester, and demonstrate its use? Other questions will readily suggest themselves, but all may be summed up in the one question: Am I qualified to teach country boys and girls?"

In considering these questions, the teacher may find himself obliged to admit that he needs a special course in agriculture to supplement what he already knows by observation or home-training. Here, however, need be no bar. Short courses are given at the agricultural colleges. There are 141 teachers availing themselves of such courses at the Ontario Agricultural College, Guelph, during the present holiday season. It will pay any rural teacher to take such a course, and it will pay any rural school to pay a little extra salary to the teacher—other things being equal—who has taken such training. Farming cannot be taught completely, nor nature study, in any short course. But principles may be taught which may form a strong foundation to build upon; inspiration may be imparted; and lists of books, apparatus, etc., given for further work. With such a foundation, the alert and enthusiastic teacher can go on and do good work.

It may be speaking in advance of this age, possibly, to suggest that trustees might help their teachers to acquire the necessary enthusiasm; yet, if the time ever comes when the education, physically, mentally and morally, of the child is generally held to be of as much importance as the development of a strain of cattle or horses, the thing will not appear so visionary.

A leading Canadian educationist has

their preparatory course, a training in some agricultural college—enough training to enable them to understand and appreciate the agricultural side of biology, chemistry, physics, geology, etc. "One of the first essentials for getting the subject of agriculture properly started in the schools," he says, "is to have a body of sympathetic and prepared school inspectors. If this is not done, the most enthusiastic teacher may be to a great extent submerged or lost sight of, because of some unsympathetic inspector. I have visited country schools with inspectors who, while quite interested and sympathetic in the cause, really do not know how to show the teachers what to do or how to do it. If these inspectors could go to the O. A. C. at Guelph, or some similar institution, for a few weeks, and have the elementary subject-matter and pedagogics of the subject properly placed before them, much good might result."

With teachers, inspectors, parents and trustees all working in sympathy, what might not be accomplished towards making the great rural population more intelligent in their work, more prosperous—above all things, more interested and more happy. It is ridiculous that the education given in rural schools should have been for so long carried on with no rural bent whatever. It is for the energetic, who are fully aroused to the importance of the matter, to bring about a new regime.

**The Spoliation of Country Roadsides.**

We quote from New York Independent: "There is an admirable society in Boston called the 'Society for the Protection of Native Plants.' A recent leaflet of this society, written by Walter Deane, makes a strong appeal to spare our roadside scenery. Mr. Deane pleads against the present-day tendency to 'clear up' the roadsides by cutting down the very plants that beautify them, and which our modern landscape gardeners are striving to reproduce in private grounds and public parks. He says:

"The amount of information that the country roadside can impart to him who seeks it is unlimited. One day I took a short walk along a country road in New Hampshire, where the roadside tangle was left untouched. It did not harm the road, and it did not encroach upon the field beyond. Out of curiosity, I began to note the plants along the way. In ten minutes, of trees, shrubs and smaller plants, I had written down sixty-five species. It is this feast for the eye and the mind that makes country roads so attractive."

"It will be well for road commissioners and the owners of roadside property to think on these things, and conserve our greatest rural beauty."

At first thought, the average road-maker may consider this twaddle and nonsense. The reasonableness of it will appear when it is remembered that our native plants which grow among hardwood trees, such as should line every roadway, are not weeds. Almost without exception, they are unaggressive, never running past the woods into the fields. As a matter of fact, all of our troublesome weeds, including the so-called "Canada thistle," have been introduced from abroad. There is no appeal to save these, but only our "native" plants, native alike to Ontario, Quebec, and the Eastern Provinces of Canada, as well as to New York State.



Evidently Not the "Ugly Brick Building."

This schoolhouse was built by Mrs. William Mackenzie, Kirkfield, Ont., and presented, with six acres of land, to the section. We should have more rural schoolhouses of pleasing appearance.

interested in rural-school work will be informed as to seeds and soils, and know something about the laws governing plant and animal life. In this connection it might be well for every rural teacher to ask himself a few questions like the following: Can I name and identify a dozen birds, a dozen trees, a dozen wild flowers, and a dozen weeds found in my school district? Do I know what is meant by "a balanced ration"? Can I pick out the best ear of corn in an exhibit, and tell why it is the best? Do I know which crops take the largest per cent of valuable ingredients from the soil? What do I know about crop rotation? Do I know why corn needs cultivation? Can I

already expressed himself on the subject thus: "I believe that a scheme for inciting the trustees to help their teachers in the matter should be encouraged. For example, the trustees might be prompted to spend some portion of their school money in sending their teachers away for short special summer courses. The trustees could be reimbursed in this by special grants. The poor country-school teacher is a terribly isolated worker in a cause which requires all the inspiration that can be got, anyway."

This same educationist is strongly of the opinion that science teachers in the High Schools and public-school inspectors should have, as part of

after results may be pneumonia or tuberculosis.

Indigestion.—Nothing is better for indigestion than  $\frac{1}{2}$  a teaspoonful of baking soda in two or three ounces of hot water, as hot as baby can take it; feed through a nursing bottle or with a spoon.

Diphtheria begins with a sore throat, high temperature, swollen glands in the neck, and white patches on the throat, and a discharge from the nose which is sometimes bloody.

In all these diseases the mother should be most careful to avoid spreading the contagion. It is foolish to say "children have all got to have these diseases sooner or later, and they might as well have them over with." All people do not have to have these diseases. After twenty-one years of age the chance of taking them the first time is no greater than the chance of taking them the second.

Castor oil is one of the most valuable remedies. The dose is 15 drops up to three months, 30 drops at six months, and 1 teaspoonful at one year. A young baby will take it readily if the nose is held and the spoon tipped well back in the throat. A little granulated sugar sprinkled immediately on the tongue will give a pleasant sensation and cause the baby to swallow.

For older children, the oil may be put in an orange-juice sandwich. In a dessertspoon or tablespoon squeeze enough orange juice to coat the spoon, and fill it one-fourth full, add the required amount of castor oil and then fill up the spoon with juice.

Castor oil should be used chiefly to remove some fermenting substance in the intestines, as in diarrhea, or constipation with fever.

### The Beaver Circle.

[All children in second part and second book, will write for the Junior Beavers' Department. Those in third and fourth books, also those who have left school, or are in High School, between the ages of 11 and 15, inclusive, will write for Senior Beavers'. Kindly state book at school, or age, if you have left school, in each letter sent to the Beaver Circle.]

#### Sleeping Out of Doors.

Boys—and girls, too—have you ever tried sleeping out of doors in summer, in tent or summerhouse, or on porch or veranda? If not, you ought to try the experience for a while. Country folk seem slow to take up this new practice, and yet it is growing rapidly in the cities. I know many people in this city who never think of sleeping indoors, except in rainy weather, from May to November. I should think it would be much more pleasant in the country, where the milk-wagons do not come rattling over a granolithic pavement at 4 o'clock in the morning.

Now, I am going to close by quoting the words of a country-lover, who has given the plan a trial, and who is, by the way, no other than Julian Burroughs, son of dear old John Burroughs, of whom you have heard. Here is what he says:

Though I am a farmer, working all day in the open air, a year ago I began to sleep out on an open porch, both to see what effect it would have on my health and to study the sounds of night. It has proved a delightful revelation to me in every way; I am stronger, can do more work, and have had no colds; further, I feel that I have come closer to nature, and have won some priceless memories. A person who works all day has neither time nor strength to be prowling around at night studying nature. Sleeping out of doors brings nature to you.

One starlit November night, a gray fox woke me suddenly by barking a few feet away in the vineyard below the house. Though I sprang from bed instantly, he was too quick for me, barking defiantly a moment later in a piece of woods to the north. Once heard, the bark of the gray fox can never be forgotten—a loud, sharp, hoarse squall, penetrating and elusive, the mocking voice of a predatory night prowler.

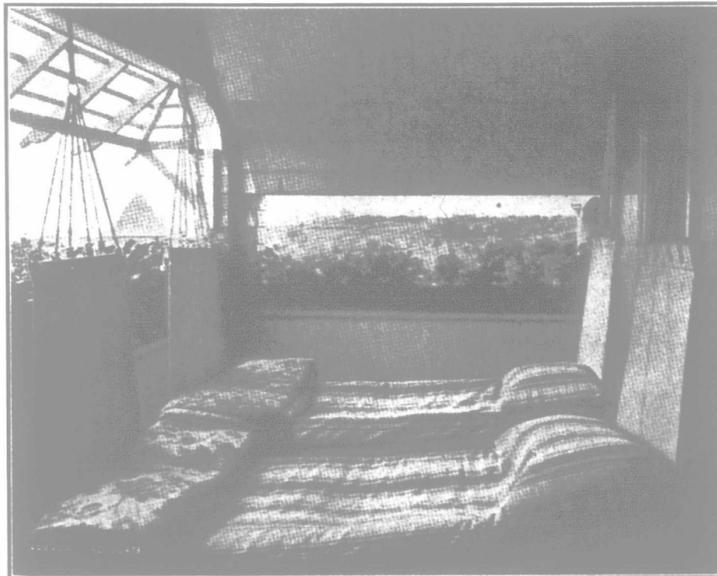
Another night a fox entered my henhouse. The agonized cry of "Tiny Tim," the cripple chicken that he seized, brought me running and shouting in a moment. I was too late, and, though I ran furiously on the trail of feathers that I saw

in the moonlight, I could not overtake the fox. After that, I set traps with all the skill I was capable of, but never again did the fox venture into the henhouse. I'm sure he smelled the marks of my hands on the iron.

In the caressing nights of early summer, when the river is sparkling with the lights of the shad-fishermen, I hear the gentle song of the social sparrow and the more brilliant notes of the purple finch. From the fringe of woods along the river sometimes comes the quavering whistle of

On rare occasions he gets a mink, more often a muskrat or a neighbor's cat or dog; on occasions a penetrating odor on his return tells me unmistakably that one less skunk is at large.

I am so snug and warm in my blankets, and the morning is so beautiful, I often hate to get up. But how keen one feels, and what zest for the day when really awake! Though having had an ideal night's rest, I have learned something of the night besides; nothing out of the ordinary could have happened without my



Sleeping Out of Doors.

Any handy boy could make beds such as these for the porch.

the screech-owl, or the call of the cuckoo. Then I may hear the soft talking of my flock of tame mallards. Perhaps one of my "gorley geese," as the children call them, will awaken me with his clarion-like complaints.

Once I had a winged black duck (anas obscura) in a pen near the house with one of my mallards. In the early light of the morning this wild bird would come slyly out, preening itself or puddling in the dish of water. Compared with the tame mallard, bred tame for but one generation, how sly and repressed and furtive this truly wild bird seemed! If I raised my head or moved, it was off like a shadow. One day I found it was truly gone; its wing having healed; it had silently flown away.

In the autumn mornings I always hear the hired man going to look at his traps,

knowing it. I have heard the night sounds and felt the pulse of nature, from the beautiful moonlight over the river; the roaring, crashing thunder shower, with its dazzling lightning; the driving, sobbing north-easters of autumn, or the savage gales of a winter north-wester.

#### Beaver Circle Notes.

Winifred Colwell, King's Co., N. B., has sent us a very nice tabulated description of Spring Beauty, Twisted Stalk, Wood Anemone, Low Evening Primrose, Star-flower, Pepper Root, Pearly Everlasting, Indian Turnip, Adder's Tongue. Next time, I hope, she will put her description into a composition, so that we can publish it. I am sure she loves flowers very much, and could write well about them. P.

#### Water for the Dog.

The City of Mexico has a law, almost a century old, requiring streetkeepers and business men in general, to keep pans of fresh water in the doorways of their business establishments for the relief of dogs. The law was secured through the efforts of the kind-hearted women of the city, and, in consequence, Mexico City never has a mad-dog "scare," and hydrophobia is unknown, and muzzles are unnecessary.

In enlightened America, in sharp contrast with "barbarous Mexico," when and where is provision made for man's friend, the dog? Only a small proportion of public drinking fountains are so constructed that dogs can drink from them, and the thirsty dog must wander disconsolately about until his sufferings become so acute that he is pronounced mad, and the usual tragedy is the result.

The matter is one that can be regulated without the aid of law. Let the householder spare a thought for the dog, as well as for the horse. A pan of water in the yard will soon attract attention, and perhaps will be the means of preventing another one of those "scares" which speak so ill for public common sense. In summer, never let the pan provided for the household pets be empty. One will be astonished, if he observes closely, at the number of times an animal will drink during the day.—Our Dumb Animals.

#### Our Junior Beavers.

##### The Boy Who Forgets.

By Pauline Frances Camp

I love him, the boy who forgets '   
 Does it seem such a queer thing to say?   
 Can't help it; he's one of my pets.   
 Delightful at work or at play.   
 I'd trust him with all that I own.   
 And know neither worries nor frets.   
 But the secret of this lies alone   
 In the things that the laddie forgets

He always forgets to pay back   
 The boy who has done him an ill.   
 Forgets that a grudge he owes Jack.   
 And smiles at him pleasantly still   
 He always forgets 'tis his turn   
 To choose what the others shall play.   
 Forgets about others to learn   
 The gossiping things that "they say."

He forgets to look sulky and cross   
 When things are not going his way;   
 Forgets some one's gain is his loss.   
 Forgets, in his work-time, his play   
 So this is why I take his part.   
 Why I say he is one of my pets.   
 I repeat it, with all of my heart.   
 I love him for what he forgets!   
 —St. Nicholas



"That's Where I Would Be."



A Holiday Dream.

Maud E. Sargent.

It is holiday time, and little Jack Has nothing to do but play, So weary now, he has gone to sleep, As the twilight gathers gray.

And he dreams that his toys are all alive, And the house is built of blocks, White sheep feed under the stiff green trees That grow in the farmyard box.

The beasts march out of his Noah's Ark, On the bell-rope Jappies swing, The brownies drive to a match at Lord's, He can hear their laughter ring.

But the goblins climb to his resting-place— How their bright eyes flash and gleam! They grin, and pull at his curly hair— He wakes—it is all a dream! —Little Folks.

Dear Puck,—I have never written to the Beaver Circle before. I live on a hundred-acre farm near Port Elgin, in Ontario, with my father, mother, grandmother, two brothers, and my sister, who is my favorite.

We have three horses and three colts. Their names are Jean, Dolly, Dandy, Dick, Dora and Prince. Prince is the little colt; we just got him last Saturday night. I go to school every day when there is any. My teacher's name is W. Clark. I like him very much. I am in the Senior Second Class, and have been going to school two years at Easter gone past. I am eight years old.

MARY JEFFREY (Book II).

Port Elgin, Ont.

Black-eyed Susans.

By Alix Thorn.

Fine and sturdy, lithe and tall, swaying in the grasses, Sun-browned band! I see them come, happy, country lasses; Haunts of June they love, 'tis true, trooping altogether— Out alike in sun and shower, do not fear the weather.

Frisilly, yellow bonnets wear, never think of changing, Suits them well, the saucy ones o'er the country ranging, Cheerful gypsies, friends of birds, know the brooklets turning, Coax their secrets from the bees, meadow gossip learning.

On a sudden they have flown, sober, Nature's seeming, Underneath the bending sky lie the fields a-dreaming, Yet, the months will quickly pass—saucy faces showing, See! The roving ones return, frilly bonnets blowing.

Cutting Hair.

If the children's hair must be cut at home, try to have sharp shears. Push the comb through the hair, in the direction opposite to which it lies on the head, and then clip off the ends of those hairs which project through the comb. Do this, little by little, taking hold of fresh hair with the comb continually, have plenty of patience, and the job will be completed as artistically as though the barber had done it.

A stranger in Denver was crossing a crowded street when he saw a big auto bearing down on him. He tried to get out of the way by stepping to one side, but cars and carriages made the auto swerve right toward him. He tried again, but once more the auto came for him. Finally, he gave one last, desperate effort, and dived on to the sidewalk, landing on his neck. The auto sped on down the street, and the man slowly arose and brushed up his clothes. When he had done this for the first time, he turned to a man he saw in the crowd. "I would seem that you are a doctor," he said, "and I refer to you as a doctor." "Why, the quickness of the death was the man's reply, and he was dead in a moment or the other."

The Ingle Nook.

[Rules for correspondents in this and other Departments: (1) Kindly write on one side of paper only. (2) Always send name and address with communications. If pen-name is also given, the real name will not be published. (3) When enclosing a letter to be forwarded to anyone, place it in stamped envelope ready to be sent on. (4) Allow one month in this department, for answers to questions to appear.]

Hints from the Hospital.

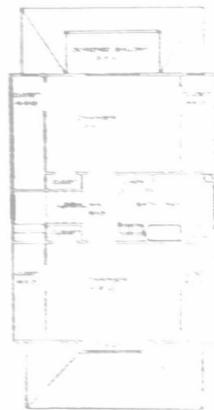
Have you ever spent any time, either as patient or visitor, in a hospital? If so, did it strike you that a number of hospital methods might be adopted in the home with very good results? Of course, we would not like our homes to look exactly like hospital wards, but some day, when we have learned to value cleanliness and sanitation above mere looks, we shall have painted, or stained, or lin-

edies—now sleep in "sealed" rooms, and the housekeeper is rare indeed who does not keep doors and windows open all summer, and throw them open every morning all winter, to be sure that the air is changed in every part of the house. People are beginning to understand that fires burn better, and blood grows warmer, when the air is continually purified, so that, in the end, the good of the fuel is better realized by seeing that the out-door air frequently takes the place of the vitiated air of the house. . . . A winter note, this, a little previous, perhaps.

Finally, look at the nurses' dresses. What admirable house-dresses they would make,—plain gored skirt, plain waist, plain sleeves, a one-piece affair, easy to "get into," and with never a frill nor an unnecessary fulness, nor a furbelow of any kind to make ironing difficult! To look at a nurse's uniform, one might imagine that a mangle might do the work. With a couple of navy blue print or bollard gowns made so, and an oil-



First-floor Plans



Second-floor Plans

oleum-covered floors over the greater portion of our houses, trusting to a few removable rugs for the necessary cosiness. Such a floor is very easily kept clean, whereas the tacked-down carpet is a fine dust-catcher and dust-holder, and is difficult to sweep even superficially. Possibly a vacuum-cleaner might keep it really clean, but it will likely be some time before every family in the land is provided with one. Cloth-upholstered furniture is also likely to become, in time, a series of dust-traps, if kept in the general living-room.

cloth apron for kitchen wear, surely the question of keeping house dresses clean with but little labor must be met. There are other hints that may be picked up in a hospital, and of these not the least important, in time of sickness in the home, at least, is the necessity of the most absolute care in disinfecting. Dishes from the sick-room are not only washed, but scalded; sheets and pillow-cases give evidence of thorough boiling, and after the slightest duty performed about a patient whose disease may be in the least likely to spread, the nurses in-



An Attractive Small House. (Sabrina's Life)

Upholstery in leather, or wooden furniture of comfortable contour, with plenty of cushions, that may be taken out and beaten clean when necessary, is better. So dust may be got out of the house, and dust, as is becoming so widely known, is one of the most common microb-holders. Observe the ventilation of the hospital. How continually the air is changed—how many open windows there are—how vents to shut off drafts when necessary. How pure the air smells, albeit a whiff of drugs or disinfectant may come occasionally. The fresh air of a crime however is now what is being said, spreading over the country. It is a sad case how few even in

variously wash their hands with soap, or perhaps some disinfectant. The scrupulous care with which they wipe down everything in regard to a patient is also noticeable—the amount of food taken and the time the medicine given—all such details are immediately written in the chart for the convenience of the doctor's attendant. So, the introduction of a disinfectant into some of the cases of sore throats, which were a very real help to the patient, and a necessary reminder of the general principle of the most scrupulous care in the hospital, should be a lesson to the home. That may seem a little far-fetched, but it is a lesson that may be learned.

are not trifles in the sick-room, while the chart renders it impossible to forget the time at which such and such things should be done. Doubtless many a patient has died because of just a little carelessness. The body is a delicate mechanism at best. In serious illness, life may hang by a hair. D. D.

A Girl's Room.

Dear Dame and Chatterers.—Please may I draw my chair up again to have a little chat, which I enjoy so much. So Jack's Wife is away out of Canada altogether now. When "The Farmer's Advocate" comes, it must seem like getting a letter from home, or else some dear friend.

Would madras curtains be nice for a girl's room, to make it look cosy? I would like curtains over the doors in my room, same as at windows, and paper all to match; then, my idea was, it was cosy for one's lonely self. Don't you think an exchange would be nice for this corner of ours? I mean exchange, for instance, stenciling patterns, or patterns of any kind, or flowers, bulbs, or seeds—anything. I think it could be made even more interesting by adding this. Will someone else send their idea?

Could you furnish me with a recipe for a good orange cake and marble cake? I must draw my chair away, thanking you in advance. Please, Jack's Wife, kiss baby for me. I do love them. SNOWDROP.

Benmiller, Ont.

Scrim, art muslin, and chintz, or simple white muslin with insertion border, are all more popular than madras for bedroom. A portiere for the door would need to be of heavier material, but portieres are seldom used for bedrooms.

Orange Cake.—Make an ordinary layer cake and put together with the following filling: Cream 2 tablespoons batter, beat into it 2 tablespoonsfuls and a half of flour; add the grated rind of an orange, 1/4 cup orange juice, 1 tablespoon lemon juice, and 1/4 cup sugar, and stir and cook over hot water until thick. Cover and let cook gently for 10 minutes. Beat an egg until light; beat in 1/4 cup sugar, and cook in the hot mixture for a moment. On top of the cake, put a frosting made thus: To the grated rind of an orange add 2 tablespoons orange juice and 1 tablespoon lemon juice. Add these to the beaten yolk of an egg, then stir in confectioner's sugar to make a frosting.

Marble Cake.—White part: 1/4 cup butter, 1/4 cup sugar, 1/4 cup sweet milk, whites of 2 eggs, 1 cup flour, 1 teaspoon baking powder. Dark part: 1/4 cup butter, 1/4 cup brown sugar, 1/4 cup molasses, 1/4 cup milk, yolks 2 eggs, 1 1/4 cups flour, 1 teaspoon baking powder; cloves, cinnamon and nutmeg to taste. Drop the white and dark in alternate spoonfuls in a loaf tin.

Fruit Cookies.

Dear Dame Burden,—I saw in a recent issue of "The Farmer's Advocate" a request from "Farmer's Wife" for fruit cookies. I am sending one I have used for a long time, and think it an excellent one. These cookies will keep a long time if you will let them.

Fruit Cookies.—Two cups brown sugar, 1 1/4 cups butter, 3 eggs, 1 teaspoon soda, 1 teaspoon each of nutmeg, cloves and cinnamon, 1 cup currants, 1 cup raisins. Mix with flour stiff enough to roll out. The softer the dough is, the better the cookies will be. M. H.

Ontario, Ont.

Recipes.

Dear Dame Burden,—I am taking time to send you and write a few lines to you. I was pleased to see my other letter in print. I will send a few recipes.

Starch Cake.—1 cup sugar, 1/4 cup cornstarch, 1/4 cup milk, 1/4 cup cornstarch, 1 cup flour, 1 1/2 teaspoons baking powder, salt and cornstarch together two parts. Whites of 3 eggs beaten stiff with rose is nice. Strawberry Harry.—2 cups flour, 1 cup sugar, 1/2 cup water, 2 teaspoons baking powder, 1 teaspoon soda, 2 tablespoons butter. Put all in a bowl and mix until light. With a rolling pin to a cream 1/2 cup sugar, dissolve 1/4 cup

cornstarch in 1/4 cup milk, and add to butter and sugar, 1 cup flour, 1 teaspoon Magic baking powder, whites of 2 eggs beaten stiff, 1 cup chopped walnuts. Flavor with vanilla.

Snow Pudding.—One box gelatine, the juice of 4 lemons, 1 cup sugar, 2 cups boiling water and 1 cup cold water, 1/4 cup cherry juice. Let cool and thicken, then beat in whites of 3 eggs. Serve with custard (boiled).

Cheese Straws.—One pint grated cheese, 1/2 pint flour, 2 tablespoons butter, a little salt. Mix with water, roll out, and cut into strips five inches long. Bake a light brown. Grate cheese well.

Lamp chimneys should not be washed, as this makes the glass brittle, but if held for a moment over steaming teakettle and then polished with a soft, dry cloth, the result will be all that could be desired. BUSYBODY.

Essex Co., Ont.

Our Scrap Bag.

When making any kind of wash dresses, those for children especially, it is a good plan to haste a piece of the material on the inside of the dress and let it be washed with it. Then, when the patch has to be put on, it will be the very same color as the dress.

Shine on the elbows and shoulders of coats, and on the back of skirts, may be removed by gentle friction with emery cloth.

To Clean Mirrors and Windows.—Rub with a soft rag moistened with wood alcohol.

For very fine white waists, dresses or lingerie, try dipping in skim milk, instead of in starch. It gives enough stiffness and will not rot the clothes.

Lace curtains that are almost too far gone to wash, may be made do duty for another season if cleaned as follows: Brush and shake well, and put in a large bag made of white mosquito netting, then shake and rub lightly in a lather made with soft water and white soap; finally rinse several times, pin carefully on a stretcher, and dry.

If carpet is wearing in the center, change the breadths from the center to the sides, and scrub with a lather of soap-bark, then rinse, rub as dry as possible with soft, dry cloths, and leave on the floor until dry. Finally lift the carpet and put paper underneath.

Dirty gilt frames may be cleaned as follows: Mix together a little white of egg and common soda, and remove the specks by applying with a very small, soft brush. If there are any cracks and scraped patches, cover them with Diamond Gold paint. A simple cleanser for gilt is said to be the water in which onions have been boiled, and enough sulphur to give a golden tinge. Another is to rub the frames with fresh bread, upon which a few drops of ammonia have been poured.

Make your own sausage. It is cheaper than bought sausage, and then you know exactly what goes into it. If care is exercised, vinegar may also be made at home. If there is too much stale bread to use up in puddings and griddle-cakes, dry the slices in the oven and roll to crumbs. Put away to roll croquettes, etc., in, before frying. Scraps of meat may be used in a variety of ways; stale cake may be steamed and served with sauce as pudding, or made into trifle; left-over vegetables can always be worked up into salad.

To mend broken china, make a solution of gum arabic. Stir plaster of Paris into it until as thick as cream. Apply with a brush to the broken edges, join together, and leave for three days.

When lemons show signs of becoming hard, put them in more than enough water to cover them, and change the water every day.

Keep cheese moist by wrapping it in a cloth wet with vinegar. Scraps that may have become dry, may be grated and used up with macaroni, or as potatoes and cheese.

To Re-cover Umbrellas.—Buy dull-finished satine or gloria. Take the steel cap off the upper end of the umbrella, rip off the old covering, and use one of the sections for a pattern. Lay it on the material with the selvedge edge for the edge of the umbrella, and cut out the required number of sections. Join them by French seams, and tack on the frame.

To Clean White Feathers.—If not too much soiled, immerse in a basin of flour and shake out, repeating until the feathers are clean. Some mix gasoline with the flour, and shake off when dry.

To Remove Tan.—Try the juice of a lemon strained in half a cup fresh milk. Apply to the skin before going to bed. May wash it off in fifteen minutes or half an hour.

To Remove Freckles.—Mix lemon juice with half the quantity of cold water. Dab on the freckles and leave half an hour. Then wash off with water softened by boiling a pint of it with a large handful of bran. After using the remedy, apply a little cold cream and a light dust of powder.

To Remove a Scorch.—Cover with damp starch and lay in the sun for an hour. If the scorch is very bad, dampen the starch with lemon juice.

To Remove Machine Oil.—If material is stained with machine oil while being stitched, wash out at once with cold soft water.

Before cutting out new shirtwaists or dresses, put the goods into a large pan of water and let stand overnight. This will shrink it perfectly. In the morning press it while still quite wet.

A Starch that is Always Ready.—Take 1 cup cold water to every ounce of gum arabic. Put in a wide-mouthed bottle, and set the bottle in a saucepan of cold water over a slow fire until the gum arabic is dissolved. Strain the liquid through muslin while still warm. When cold, add one gill of alcohol. For fine laces or any material that needs a very little starch, half a teaspoonful of this starch, with a cupful of cold water, will be enough. For heavy fabrics, use a larger amount.

To Hold a Window Up.—Our windows had neither weights nor springs, and for fear of baby moving the support and being injured, I screwed two screen hooks just outside of the window on the casing and the screw-eyes on the inside, so that when the window was raised I hooked the one into the other, then let the weight of the window rest on the hooks. The window cannot be lowered except as the hooks are lifted out.—Pictorial Review.

It is woman to whom falls in greater part the training of the population in the sense of beauty, and in appreciation of the worth of beauty. Who keeps the flowers blooming in the average house lot? Who fills the one southern window with plants in tin cans and broken pieces of crockery? Who engages the florist to keep the rich house filled with flowers through all the seasons? For whom are all the beautiful objects in the rich home procured and set forth? Always by and for the woman. Who teaches the little children to enjoy the beauties of nature and of art? Always, or almost always, the woman. I look forward, therefore, to the future of the higher education for woman as a great influence in the perfecting of family life, of civic life, of household joy and good.—Charles William Eliot.

"The key to the 'rainy-day closet' always remains in my possession, and is strictly guarded. Only when a storm keeps my flock of noisy youngsters indoors do I produce the magic key. I vary the contents from time to time, but the following articles have proved most efficacious in turning my young Indians into an industrious, quiet, working band: Crepe paper, with a booklet of instructions; a box of water-colors; magazines which I am willing to have cut up; beads of various colors and sizes; a new game, and the ever-fascinating picture puzzles. Since the institution of the 'closet,' rainy days have ceased to be dreaded by even the invalid of the house."—M. D. To the list I would add a box of plasticine. It is cheap, and can be used over and over, indefinitely. The children love to make things with it.

DEGREES OF CRIME.

"Suppose I stole a kiss?" he asked. "One teeny, weeny kiss?" "Why, that were petty larceny." Replied the blushing Miss. "Suppose I stole a thousand, then?" He took her little hand. She caught her breath and murmured "Oh, Of course, that would be grand!" —Walter Pulitzer.

"The Farmer's Advocate" Fashions.



DESIGN BY MAY MANTON. 6553 Girl's Dress. Size 6 to 12 years.



6556 Work Apron, Small 32 or 34, Medium 36 or 38, Large 40 or 42 bust.



6674 Negligee with Fancy Collar, 32 to 42 bust.

Please order by number, giving age or measurement, as required. Price, ten cents per pattern. Address: Fashion Dept., "The Farmer's Advocate," London, Ont.

The Ferryman.

Twilight, grey and misty, was shutting down on the narrow, steep street of Mordinnick as a girl entered it by the road which straggles across the peninsula from Polgissy. She faced the wind with a firm step, swinging along with a confidence born of long acquaintance with winds and rough roads. Here and there lights shone in the windows, but for the most part there was no more than the occasional flicker of a fire from within. It was just the hour when the good folk of Mordinnick were beginning to think of settling down for the night, but since light cost money and most of them were poor, they made the best of the pale glimmer that still lingered in the west. As the girl passed down the abrupt street she glanced to right and left for a chance greeting; but not a soul was out of doors, and presently she emerged upon the level causeway which served as a landing-place for the ferry boat. She had hoped to find the boat on the Mordinnick side, but no boat was there. She saw only the grey water churning into waves, and on the other side of the river-mouth the scattered lights of Penquist climbing up the hillside.

There was nothing to be done but ring the weathered and jangling bell, which was the ferry signal, and sit down on the rough bench to wait. The melancholy summons floated out as it had floated out every day, Sundays excepted, for over a century, but to Bessie Ruddock the old bell had never had quite so dreary a tone. Half an hour before she had been happy enough, but the chill of the wind and the cold surge of the water seemed to strike at her heart. Loneliness with motion she could endure well enough, but to sit solitary with the lights of home almost half a mile away was quite another matter.

"Drat that John Martin," she said aloud; "'tis always the way when I be pushed for time. There's father 'll be waitin' for 's tea and puttin' all the blame on me."

She drew her jacket more closely about her, and leant forward to peer towards the opposite shore. But already the encroaching darkness hid from her most of the water between herself and the Penquist lights. She felt utterly solitary; the village behind her seemed no more human than the desolation before her. And all at once there came upon her a terror of the narrow passage which she had to cross.

It seemed to her that she had sat there staring into the darkness for an hour when she pulled the bell-rope again. The wind was rising steadily, the tide was flowing fast, and the clamor of the sea on the bar had a note of menace in it. She was about to ring once more in foolish panic, when she saw the boat heading towards her from a point fifty yards below the landing-place. She rose and stood waiting.

The rower managed his oars adroitly, and as the boat swung alongside she sprang in. In a moment the ferryman had his jumping craft round, and was pulling hard against the current.

"I thought," Bessie shouted, "that you were gwine to leave I yere all night." Her voice sounded shrill and faint, like the cry of a distant gull; but John Martin's answer swept loudly to her on the rushing wind.

"No fear o' that, Bessie. I didn't fancy there'd be more passengers to-night."

She had the tiller ropes in her hands. "Keep her head well up," John said.

The girl could hardly see his face, yet she was conscious that its lines were hard-set and that the eyes were burning. She leant forward and gazed towards him earnestly.

"Anyone 'd think you were afraid, John," she cried, with an uneasy catch in her voice.

"You're safe wi' I," he shouted back.

For some time neither spoke again, and Bessie was aware only of the spray that now and then swept over her, and of the cold and sinister desolation through which they moved. The boat was in mid-stream, and the breath of the man who was graining at the oars left him in sharp gasps.

"Can 'ee manage it?" she asked. "Aye, wi' you aboard," came the quick reply.

There was consolation, indeed, in that, and her heart warmed to the man who



seemed infinite, yet she could no more define them than she could grasp the significance of John Martin's fear.

When the room was tidied up she sat down to the endless blue jersey knitting which occupied most of the Penquist women.

"I didn't mean to frighten 'ee, Bess," he said humbly.

"'Twasn't fright, but you were i' my mind, an' seein' you there all of a sudden—Come inside, John."

He entered, taking off his cap with awkward shyness.

"I saw Mr. Ruddock goin' into chapel a bit ago," he said, "an' I thought to find 'ee alone."

Bessie set her father's chair by the fire for him, and he sat down, holding his cap in his hands.

"I came to say," said John, without looking at her, "that I shouldn't have thrown that money away. I was angered, an' I'm sorry for it."

"'Twas my fault, too, for I couldn't pay 'ee for what you did to-night. I've thought it over, John."

He turned his eyes eagerly upon her in a questioning that was half delighted and half wistful.

"Anyone else 'd 'a done the same," he said, and turned to the fire again.

"But 'twouldn't have been the same w' anyone else. Father wondered when I told him."

"What did he say?" John demanded.

"He spoke o' the fear."

For some time there was silence in the little room, broken only by the click of Bessie's needles.

"He'd no right to speak o' the fear to you. 'Tis no fault o' mine, an' the fear doesn't make a man a coward."

"That's just what I said. I never thought much of it till to-night, an' then it came to me that you mid fight it down."

She leant forward in her eagerness, a light of womanly sympathy and helpfulness shining in her eyes.

"I'll try," he said simply. "'Tis hard to be different from others, an' there's some who blame me for what's not my fault."

"Then they are the cowards?"

"'Tisn't the sea I'm 'fraid of," said John, laboring to explain, "but the fate in it. It seems as if somethin' were there waitin' for me. I've woke i' the night, an' felt it drawin' me."

"Don't think of it," cried Bessie. "There'll come a day when it'll have tried itself out, an' then you'll be yourself again."

John left before Ruddock returned from his chapel. "You've put spirit into me, Bess," he said, as he stepped into the street, and she felt a glow of satisfaction which was not far from tenderness.

He walked up the winding, grass-bordered road which loses itself on the bare cliff-sides above Penquist, and there, with the wind in his teeth, he listened to the humming of the surf below.

Often before he had faced his fear in this way, striving to subdue it by familiarity, and often before he had turned away without a conqueror, but to-night he faced it with a calm and a sense of new confidence.

For a moment John Martin tended the ferry, and passing much of Bess. Now and then he had to row her to and from Vardoe, and always she had a pleas-

ant word of encouragement for him; but he never forced himself upon her, nor did he suspect that her journeys to Polgissy had anything to do with Nat Treweek.

One morning, after he had taken Bess across, he returned to the Penquist side to find Harry Cawdray, the blacksmith, waiting with a bundle of barrel-hoops.

"Well, John, how's the ferryin' trade?" he asked.

"'Tis so good's can be expected w' so few visitors about," John answered, settling to the oars.

"Seems to I you've a rare time o't, what w' girt men like I an' pretty little maids to take across."

"I don't take much count o' the passengers," said John, smiling.

"But you'd rather have one i' petticoats than i' corduroys—one like Bess Ruddock, now?"

"Maybe I would," said John, feeling the blood in his face.

"Ah, young's young i' Penquist same's 'tis i' Polgissy, an' there's one'll be glad to clap eyes on Bess."

"Who do 'ee mean?" asked John, resting on his oars. He tried to speak indifferently.

"Why, who but Nat Treweek? 'Tis common talk that they've a-fixed things up. How often have 'ee rowed her over these last few weeks?" John shook his head.

"I can't mind," he said.

"More times than there was call for, I warrant. 'Twas allus the way betwixt Penquist and Polgissy. I marr'd one o' Polgissy, an' that were twenty year ago. They say Nat's doin' well, an' Bess is a smart lass."

When the blacksmith had landed at Mordnick and gone clattering away with his barrel-hoops, John Martin sat in his boat like a man dazed. He might have known that Bess was not a girl to be long without a lover, he might have known that her interest in him was no more than the kindness of a tender-hearted woman towards an object which excited her pity.

The days dragged on, and John Martin retired more and more into himself; yet, though joy was almost dead in him, and his life a barren round of labor that now seemed fruitless, he clung to the hope that Bess had given him.

The time of Penquist Fair drew near, and the town was agog for the great festival. It was an occasion for business as well as merrymaking, but the business was conducted unobtrusively.

Two or three days beforehand the fair field, which stood above and overlooked the town and harbor and open sea, began to be crowded with vans and swing-boats, merry-go-rounds and cocoanut shies, tents containing impossible waxworks, and every variety of side-show which might be made to pay at a penny admission.

It was the evening before the fair, and John was wandering aimlessly about the field. In and out, between the gaudily-painted wheels of the vans, the children of the show-folks played noisily, watched by groups of Penquist youngsters who envied them, yet had not the courage to join in.

Here and there a naphtha lamp flared, throwing a wavering light over the trampled grass, the shrouded booths, the moving figures of curious townspeople, and the patient forms of horses feeding quietly in the midst of bustle and con-

# World's Greatest Separator

## Standard

### SKIMS CLOSEST.

It has become common talk that any cream separator will skim close enough.

### That's all Wrong.

It is possible for one separator to skim enough closer than another to pay for itself in extra profits in 2½ years with eight cows, or, in other words, the poor-skimming separator, while getting more cream than pans or cans, loses the price of itself every 2½ years.

The "STANDARD" has reached a skimming standard, "with milk under all conditions," far above all others. The best way for you to prove this is with the machine itself. Try a "STANDARD." If it don't stand up and prove its superiority to you in results, don't buy it, that's all. Write for free catalogue. It explains all. Good agents wanted in unrepresented districts.



STANDARD. Sizes: No. 4, No. 6, No. 8. Capacities: 400, 550 and 750 Lbs. Prices and terms on application.

THE RENFREW MACHINERY COMPANY, LIMITED, RENFREW, ONTARIO.

# WESTERN FAIR

LONDON, CANADA

## Sept. 9th to 17th, 1910

### \$25,000.00 in Prizes and Attractions OPEN TO ALL.

#### The Great Live Stock Exhibition

Speed Events Every Day	Dog Show Cat Show	Athletic Day Monday
Music by the Bands of the 91st Highlanders and 7th Fusiliers		
Attractions Better Than Ever	DON'T MISS IT!	FIREWORKS Each Night

### REDUCED RATES OVER ALL ROADS

VISIT LONDON'S EXHIBITION.

Prize Lists, Entry Forms, and all information from W. J. REID, President. A. M. HUNT, Secretary.

fusion. Over the hum of voices sounded a continuous hammering.

At the far end of the field John saw dimly the tall form of Ezra Ruddock. He stood there with folded arms, like a man brooding on some baffling thought.

"Good evenin'," he said. "They be a'almost ready for to-morrow, Mr. Ruddock."

"Ready for what? For vanity an' foolishness, John Martin. Time an' money'll go like water an' God's name be blasphemed."

"You're too hard, 'tis mostly innocent fun enough."

"I tell 'ee, the Scarlet Woman flaunts around such places, an' I know. If I'd my way I'd sweep the lot into the sea," and he flung out his arms in a wide gesture that had in it a kind of passionate dignity.

"You should mind the time when you were young," said John, stoutly.

"I do mind it, an' I pray night an' day to be forgiven for that time. For years an' years I grovelled i' the pit. This Penquist Fair's one o' the easy roads to hell. But 'tis no use to give warnin'; all o' 'em just harden their hearts. Even my own flesh an' blood

turns away from the words o' wisdom."

"You mean Bess?" John asked.

"Ay, my own girl. She'll have her way w' the rest, her head's full o' folly."

"You've no need to be afraid for Bess," said John, feeling his anger rise.

"I've lived long enough to be afraid for all." He turned suddenly on the other. "What part have you i' all this devil's game, John Martin?"

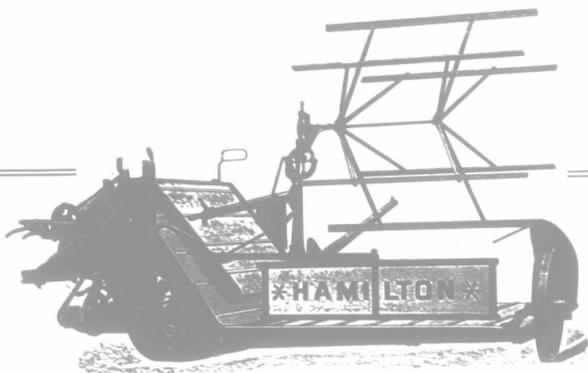
"'Tis nothin' to me," John answered, "but I've no quarrel w' they that like it."

Ezra laid a heavy hand upon his shoulder.

"Flee from it," he said, "and pray for these poor fools." Then he turned on his heel and strode away towards the town.

John stood for a time considering what the stern old man had said, but it made no deep impression on him. Only the reference to Bess stuck in his mind, and that he resented almost as something personal to himself.

He did not believe in Ezra Ruddock's hard and narrow creed. As the evening drew on the crowd in the field increased, and John moved about aimlessly. Gradually the sky cleared, and over Penquist rose the still splendor of the moon. The city's buzzing tumult



### THE PETER HAMILTON NEW No. 3 BINDER

Sweeps the field clean and brings in a full harvest under all conditions, with the least trouble and the least expense. Designed and constructed so that few parts break or wear out.

**SPECIAL FEATURES:** Strongest Main Frame. Lightest draft. Perfect balance. Easy on the horses' necks. Never-falling Knotter. Greatest Elevator Capacity. Self-aligning Boxes.

Be sure and see the PETER HAMILTON before buying.

The PETER HAMILTON COMPANY, Limited  
PETERBOROUGH, ONTARIO.

# F. C. S. College

Y. M. C. A. BUILDING, LONDON, ONT.

## We Don't Teach Everything

WE CONCENTRATE UPON:

Bookkeeping,	Practical English,	Commercial Law,
Shorthand,	Penmanship,	Typewriting,
Spelling,	Rapid Calculation,	Correspondence,
Arithmetic,	Business Forms,	Banking, etc.

Special course for those who intend to remain on the farm. Graduating course for those who intend entering business. FALL TERM FROM SEPTEMBER 6.

**FOREST CITY BUSINESS AND SHORTHAND COLLEGE**

J. W. WESTERVELT, Principal. J. W. WESTERVELT, JR., Chartered Accountant, Vice-Principal.  
Resident and mail courses. Catalogue and all particulars free.

## Southdowns

ALLOWAY LODGE STOCK FARM

A few fitted shearlings and lambs for sale, and some good strong breeding sheep of all ages. **ROBT. McEWEN, BYRON, ONTARIO.** Long-distance phone.

## WANTS & FOR SALE

**FOR SALE**—5 h. power upright Fairbanks steam engine in good condition. Price, \$50.00. A bargain. Address: Wm. H. Clam-pitt & Son, King St., London.

**WANTED**—Per year, a thoroughly experienced single farm hand. Must be steady and reliable. When unengaged at farm work expected to help with Shorthorn cattle, and also fitting same for show. Wages, \$300.00, with board and washing. A. J. Watson, Castlereag, Ontario.

## LADDERS!

We can sell you a forty-foot Extension Ladder (two lengths of twenty feet) of first-class grade, complete with poles and ropes and wires.

**FOR \$8.00.**

These ladders are listed at \$18.00, but to avoid an estate we shall sell them at this figure, while they last. Every farmer should have one. Write at once.

**THE CANADA TRUST CO.**  
442 Richmond St., London, Ont.

## Registered Seed Wheat

For a complete list of Golden Chaff, selected for 11 years, and the rules of the Canadian Seed Convention, write to the National Seed Co., 110

**C. R. Gies, Heidelberg, Ont.**

clearly, but from the confusion of his mind there emerged the shining fact that Bess had parted from her lover in anger, and that parting might mean everything to him.

He bore Nat Treweek no ill-will; he had taken it for granted that Nat had won. But if this parting meant a final separation, then for him hope awoke once more, and all that hope meant to his starved spirit. He walked on in a growing warmth of exultation that carried him into regions unexplored before. He was thrilled by crowding fancies.

At first he thought of knocking at Rud-dock's door and seeing Bess that night, but when he reached the place he hesitated and passed on. As the tension relaxed the old gloom of his curious malady returned. He could not speak to Bess until he was certain he had conquered it. In his heart he felt sure of himself, yet there was always the danger that he might again be overwhelmed by the fear, and to fall once more, he felt, would be to shame her. And then, in a flash, there came to him the thought that to-night he might put himself to the last test.

His boat lay rocking gently in the quiet moonlight. He unmoored her, leapt lightly in, and took up the oars. There was no one to watch him as he dropped down the river and across the bar, no one to know that he turned westward and pulled towards the open sea. He was alone with himself and the shadow, yet it held aloof; it seemed to him that he moved in a world in which fear had no place. And his old passionate love of the sea returned to him; the long, slow swell of it, the sense of freedom and isolation appealed to him like a memory suddenly revived. He laughed to himself as he rowed on with the dazzling shine of the harbor light-house in his eyes.

The tide was racing round the wide curve of the Mortland Rocks; he could feel the suck of it and hear it seething behind him on the treacherous ledges. He had been so wrapped above the thought of danger that his very conquest of himself brought the end. The old boat struck ground over the merciless teeth, was lifted clear, and began to fill.

He knew that the end had come, that the sea must have its own, yet when he found himself fighting hopelessly, he fought without fear. The joy of that made death an easy thing; he could not escape, but he could go gladly to the deeps. And his last glance was at a quiet sky splendid with stars, and his last joyful thought was that he and Bess had conquered.

Ezra Ruddock made John's death a text for many sermons, and he talked of the fear that had passed as though it was the fear that killed. But Bess had very different thoughts, and when her quarrel with Nat had been forgotten the having decided that she was, after all, the pick of the Penquist girls, she told him of her association with John Martin. "I never cared for him," she said, "same's I care for you, Nat; but when he died he wasn't afraid. You could tell that by his face."

Yet no one knew why John Martin had crossed the bar in his crazy boat that night—(C. Kennet Burrow, in T. P.'s Weekly).

## DISPERSION AUCTION SALE

60 Registered

## Herefords

Males and Females

The property of THE LATE W. H. HUNTER, will be held

**TUESDAY, AUGUST 2nd, 1910**  
At THE MAPLES, near Orangeville, Ont.

Sale to commence 12.30 p.m.

## Sunshine.

Beyond the dotted field of golden-rod, whose brilliant nodding tops calendar the approach of autumn, lives "Sunshine."

"Sunshine" is not a flaxen-haired, laughing girl, nor a boisterous, romping boy, but a little woman from whose chestnut hair peep strands of silver, and across whose gentle face affliction, not age, has seamed its wrinkled way. Yet neighbors for blocks about call her "Sunshine."

Her ways have not lain in pleasant places. Within the past four years she has lost by death a baby boy, a girl just blossoming into the teens, and a husband to whom she was devoted. Since that last death need has pressed her to toil and scrimp and scheme in supplying the requirements of two young children, both of whom are still on the care-free side of ten. She has assumed a man's as well as a woman's work, for long illness had depleted thoroughly the meager family nest-egg.

"Why should I always smile?" she said to neighbors who craved her secret. "Necessity, mostly."

Wonder grew that necessity, breeder of discontent and drudgery, could cause their antithesis.

"It was a matter of education, stern and, at the start, almost heartbreaking," she went on. "My little son, aged five, taught me the lesson. When my grief was deepest, after my husband's death, and it seemed that tears just could not be stayed, he said to me, 'Mamma, why do you cry so much, and always look so sad?' It makes me and sister feel dread-ful."

"That opened my eyes to myself. To live so that I made the two dear children left to me unhappy was a complete subversion of the remaining purpose of my life, for they were all I had to live and work for. I wanted to see them happy always. Many long, silent nights I debated the problem. Then came the resolution that my children hereafter should hear me in song instead of seeing me in tears; that my face should wear a smile as often as possible, and always look so sad? It makes me and sister feel dread-ful."

"Difficult? Indeed it was. Many a night, after tucking my little ones in bed, the struggle to look happy seemed almost untearable. Try as I would, in the silence, the sad lines crept into my face, and the tears moistened my eyes, until I finally hit upon the expedient of calming myself by always reading, just before retiring, something light and humorous. From this developed the habit of disciplining my mind to occupy itself in its last moments awake, with a recollection of some witticism or mirthful quip.

"The result soon followed that my face as I dropped asleep always bore trace of a smile. Nor did it take long to discover that when I awakened in the morning the smile and pleasant frame of mind were still with me. I have followed the practice for over a year.

"The experiment was worth while. It has helped me, I am sure, to view life in more cheerful mood, but, most of all, it has dispelled from my children's lives the cloud that threatened to make their days gloomy and their nights fearsome."

And the neighbors, recognizing the humanizing cheering influence of one brave woman's gentle, kindly ever-smiling face, have become valiant supporters of "Sunshine's" philosophy.—George T. Hargreaves, in Chicago American.

## Current Events.

Eight thousand five hundred men, tailors and car mechanics became idle by the G. T. R. strike.

An action has been launched following the failure of certain aviators to appear at the recent meet at Weston, near Toronto.

Sweeping prison reforms, to be adopted in Great Britain, were outlined last week in the House of Commons by Winston Churchill.

### Test It Ten Long Years

Squarely\* guaranteed for ten years — guaranteed to be all *your* piano should be—guaranteed to satisfy, or we will make it wholly right to you! A ten-year trial, you see. That should interest you.

## Sherlock-Manning

Piano & Organ Company  
London  
Canada



LOUIS XV.

### No Better Value in Canada

Absolutely every degree of high quality ANY piano can possess, and that offered you at a saving of \$100 or more. Our improved methods of manufacture make this possible. It should count with you.

### Go See This Charming Piano

Visit a music store near your home (request its name from us) and examine—test—study closely—this our new LOUIS XV. model, in hand-polished mahogany or walnut. A superb instrument, with every excellence, at a modest price. Inspect it.

#### The Broken Cup.

It was the size of a large breakfast cup, but it was thicker, and covered with a peculiar yellow, glaze. It was common enough in the district, but in England it would have fetched a high price as an example of rare pottery.

Krishla's father used it for his vodka. It held just sufficient for a day. He would fill it from the cask near the stove and put it on a high shelf out of harm's way and take nips all through the day, leaving about half for that last hour before going to bed.

Krishla's father loved vodka before all things, and he spent his waking hours thinking of it, and wondering how to prolong its effects. One day a stranger told him that if he did not eat, every mouthful of vodka would seem like two. So he gave up eating for a day, and experienced a joy that was almost unearthly. The last mouthful of vodka carrying him back to the days of his youth when he tasted it for the first time.

Next morning the cup was found broken on the floor. The old man had let it slip out of his fingers before climbing into bed. His wife was inconsolable—the cup had belonged to her great-grandfather—the luck of the house would depart, there was nothing left for them but to lie down and die.

Krishla's father did not take it so much to heart, for he already had his eye on a cup that had belonged to his great-grandfather, not that he valued it on that account, but because he knew it was a little larger than the broken one.

Krishla thought only of the supply of vodka. If his father took more than the broken cupful each day, there would come a day when the stock would be finished before they could brew a new supply, and Krishla knew how impossible it would be to buy more at the village. There, money was more easy to beg than vodka, for every man brewed according to his needs, and his liking for vodka was almost the measure of his prosperity. Krishla knew it without realizing its meaning.

The blacksmith at the top of the village disliked vodka, and wasted no time in brewing and drinking it. Krishla thought with envy of the blacksmith's house, which was always well thatched, where there was always an abundance of good food, and the children were well shod and never hungry.

There was a thin band of blue on the new cup. Krishla showed it to his father, and begged him to fill it no further.

"Krishla, you must trust me. I have been your good father thirty years, and you have not starved or suffered all that time."

The cup held more even than it appeared to, for there was a fault in its shape, a bulge on one side that delighted the old man to look upon, and the store cask ran dry about the same time that a revolutionary tract found its way into Krishla's hands. It was the usual revolutionary tract. "What you have not, others have—take it," and Krishla, with the tract in his pocket, set off to tramp to the town, thirty miles away, to buy vodka for his father. There had been much heartburning before he had gone; they had had to move the stove and lift the little stone that hid the family wealth. Very slowly had Krishla's father scooped out the kopecks which his wife had hidden into Krishla's vest.

"Come now, but return at your quickest," said Krishla's wife and his mother.

**Gourlay Pianos**

**THE PHENOMENAL SUCCESS OF THE**

**Gourlay Pianos**

is not accidental, but the natural result of the realization of a higher ideal in piano quality than ever before recorded in the history of Canadian piano building.

Musicians and all music lovers who are ready to acknowledge superiority have recognized their superlative qualities and voluntarily paid them unstinted praise.

Allow us to tell you more about them. Ask for Catalogue and prices.

**GOURLAY, WINTER & LEEMING,**  
188 Yonge Street, Toronto.

**Let Us Tell You All About**

**RUBEROID**

TRADE MARK REG.

**Roofing**

Everybody who lives in a house ought to know how to tell the difference between good and bad roofing. That is why we have printed two instructive books on roofing for distribution among house-owners.

These two books—"All About Roofing," and "The Ruberoid Album"—will be sent free for your name and address.

They tell about the various kinds of roofs; why some roofs last longer than others, and need less repairs, and what good roofing ought to cost.

Write for the books to-day.

**THE STANDARD PAINT COMPANY OF CANADA, LIMITED,**  
286 St. James Street. MONTREAL.

**Canadian National Exhibition, Toronto**

AUGUST 27th to SEPTEMBER 12th, 1910

**\$50,000.00**                      **\$35,000.00**

In prizes for products of the farm, the home and the garden.      In live-stock premiums. For information and prize lists write:

**J. O. ORR, MANAGER, CITY HALL, TORONTO**  
ALL ENTRIES CLOSE AUGUST 15TH

**POLES OF STERLING QUALITY**

Michigan White Cedar

**W. C. STERLING & SON COMPANY**

Oldest Cedar Pole Firm in Business

Producers for 30 Years

MONROE, MICHIGAN                      1910

"I shall look for you every hour," added his father, who, like the wily man he was, had saved a week's vodka in case Krishla should be delayed.

He arrived at the town the next day, bought the vodka, after much haggling, and carried it safely to the town gate. There he was detained whilst some soldiers passed, and to while away the time he seated himself on the vodka cask and read the revolutionary tract.

So engrossed did he become, that when someone kicked him violently, he was surprised to see an officer standing near him, glaring fiercely.

"Miserable clown, how dare you sit there without saluting me. Stand up before I order you to be flogged."

Krishla stared in dull amazement, for it seemed that the sayings of the tract were being enacted before him. It took some time for him to recollect himself.

"Who are you to require saluting? Are you not another man like myself? A fig for you and your thrashings!"

The officer was speechless for a moment, but suddenly seizing the long hide whip of one of the soldiers, he struck Krishla with all his strength across the face.

The young man sprang to his feet, but before he could stir, half a dozen Cossacks had seized him, and at a sign from the officer, he was led to the guard-house without the gates. "Bring me the paper the rebel was reading," said the officer to his orderly, and jumping on to his horse, he jogged carelessly away.

It was in the middle of the night, and Krishla, with the cask of vodka on his shoulder, stumbled wearily across the swampy fields.

At the first signs of day he crept into a deep hollow and there lay until night came again and he dared stretch his cramped limbs and continue his way homewards.

He arrived in the middle of the fourth night, without once having tasted food, living upon sips of the vodka. It was some time before they would open the door to him, and then in the dim stove light he looked so aged that they scarcely believed that it was Krishla.

It did not take him long to relate what had happened.

"There was one of the soldiers had a good heart. I told him why I had come to the town, and he took pity upon me. My doom was sealed, they all said that I should be sent to Siberia, but when I spoke of my wife, the kind soldier told me how to escape. 'See, there is your cask of vodka, the officer cannot have seen it, and we soldiers will not rob you of it. When night falls, walk out, take it, and begone; not to your village, but away across the sea.'"

Krishla's wife set up a low wall, whilst his father and mother threw up their arms in despair.

"It is too true," cried his father. "you have done very wrong, and you must fly to save yourself. Foolish son, what did it cost you that you refused to salute the officer. Who knows but that vengeance will be wreaked upon us?"

Once again the stove was moved, the stone lifted, and the bag of kopecks taken from its resting-place. Slowly, very slowly, were the pieces counted into Krishla's hand. Each coin was like as much of the old man's blood, and it was a thin, light bag that went back beneath the stone, which the old man replaced, cursing at his son's folly.

Krishla and his wife fled to England. Everyone told them they would be safe there, and that if they could not keep



## No Man, Woman or Child Need Have Holes in Their Stockings

That annoyance and discomfort can be done away with. Neverdarn Holeproof is guaranteed hosiery—six pairs guaranteed holeproof for six months—and they cost no more than ordinary hose. For any pair that comes to holes you get a new pair free of charge. Our signed guarantee slip is in every box, with a separate coupon for each pair. Know what absolute hosiery comfort is—no darning—no mended hose—buy

# NEVERDARN Holeproof Hosiery for the whole family



"Neverdarn" Holeproof Hosiery is made of specially prepared maco and long fibre Egyptian Lisle yarns—the best that money can buy. This yarn is interwoven by special machinery. Ordinary methods would not produce Holeproof quality. The heels and toes are doubly reinforced, as are the knees of the children's hosiery. The dye is absolutely fast. "Neverdarn" Holeproof Hosiery is stylish in appearance, soft and easy on the feet, and perfect fitting. They combine durability, elegance, economy and comfort. Look for the Trade Mark on the box and on the hose. Look for the guarantee slip in the box.

**Read this Guarantee**  
If any or all of this six pairs of hosiery require darning or fail to give satisfaction within six months from date of purchase, we will replace with new ones free of charge.

**6 Pairs Guaranteed \$2.00**  
6 Months

"Neverdarn" Holeproof Hosiery for men and women is sold six pairs in a box for \$2.00. Children's sizes are 3 pairs in a box for \$1.00. Only one size and color in each box. A box will surprise you, please you and convince you. Order from your dealer; if he hasn't them, write us enclosing money, money order or bills, and we will send them express paid. State size and whether black or tan. Write to-day.

**The Chipman-Holton Knitting Co., Ltd.**  
144 Mary Street, Hamilton, Ont. 4513

"It's the name behind the guarantee that makes it good."



## Why Have Grey Hair?



Why have grey hair when Princess Hair Rejuvenator

will restore it to its natural color in a few days, at the same time making it glossy and beautiful? This harmless, clear as water preparation, which contains no poisonous sugar-of-lead, and is not sticky or greasy like lead and sulphur preparations, has been used successfully for years. It has our personal reputation and that of the other PRINCESS TOILET PREPARATIONS behind it. It is easy to apply does not rub off has no odor cannot be detected best for brown or black hair not more than half grey keeps the hair fluffy and natural use it and the hair will not have a dyed appearance always safe to use. PRICE, \$1.00 delivered, if your druggist doesn't keep it.

A liberal sample and booklet "F" sent on application.

### Superfluous Hair

MOLES, WARTS, POWDER MARKS, RED VEINS, "COW LICKS," ETC., permanently removed by our antiseptic method of Electrolysis, which is safe, sure, practically painless, and satisfaction assured in each case.

Bear in mind there is positively no other treatment or preparation that will permanently remove hair from the face.

Hiscott Dermatological Institute,  
61 College St., Toronto.

Established 1892 Tel M831

## CIDER PRESSES

THE ORIGINAL MT. GILEAD HYDRAULIC PRESS produces more cider from less apples than any other and is a BIG MONEY MAKER. Sizes 10 to 40 barrels, hand or power. Presses for all purposes, also, cider evaporators, apple butter cookers, etc. Free literature on request. C. A. Log Farm, We are manufacturers, not jobbers.

HYDRAULIC PRESS MFG. CO.  
110 Lincoln Avenue, Mount Gilead, Ohio

themselves, the English people were so rich that they would keep them. They contracted for the voyage to Hull, and then by railway to London; but the contractor, expecting them to sleep most of the way, forgot to provide any food. Krishna was not much the worse when they arrived at Hull, but his wife, who was in a weak state of health when they started, was too ill to proceed, and they spent the night at the immigration office. Her illness appeared to puzzle the alien officers, but the medical examination revealing nothing much worse than exhaustion, they were allowed to pass, and next morning went on by train to London. There the contractor's part ended; his agent had had some difficulty in allowing Krishna and his wife to travel by the ordinary train, but it was made right at last, and they were sent on their way with a handful of small Russian coins, and without knowing a word of English.

Arrived in London, the woman was, if possible, worse than she was at Hull; but in response to her husband's anxious questions, she asked only for food. Krishna was a little bewildered in the great railway station, but he led his wife to a seat and set off in search of food. When he spoke to the porters they only stared at him, and when he opened his mouth and pointed to it, they directed him to the refreshment room. He took out his money, and offered it to the young woman behind the bar and took up a tin.

She shook her head at the money, and indignantly told him to keep his fingers to himself.

He gesticulated furiously, throwing himself into strange antics in his efforts to explain, but it was in vain, and he returned to the platform. He stood for a moment in despair, when a boy in uniform, wheeling a carriage laden with cakes and fruit, passed him; once again he drew out his money and pointed to the food.

"They are welcome each," replied the boy. "I cannot take foreign money, and change."

Krishna shrugged up his shoulders, and put the money back into his pocket. At the distance he could see his wife waiting for him, and the thought of her reminded him of what his friends had said.

## Send your remittances by DOMINION EXPRESS MONEY ORDERS AND FOREIGN DRAFTS

Payable everywhere.

### Rates for Money Orders:

\$ 5.00 and under	3c.
Over 5.00 to \$10.00	6c.
" 10.00 to 30.00	10c.
" 30.00 to 50.00	15c.

Money sent by

### TELEGRAPH AND CABLE.

Issued in all stations of the Canadian Pacific Railway Co.

## Cowan's Maple Buds

(NAME AND DESIGN REGISTERED)

are different from and better than any other chocolate confection you ever tasted. Maple Buds are not made by any other concern, as the name and design is fully patented. Look for the name on every Bud.

The Cowan Co. Limited, Toronto. 87

"The English are always kind. If you have not what you want, they will always give it to you."

The boy with the carriage had come from the refreshment room, and at the platform Krishna extracted his tin slowly. He passed a moment, and the

boy, picking up an empty tray, went into the refreshment room. In a moment Krishna was by the side of the carriage, and, taking two of the largest cakes, he turned quickly to go to his wife. He heard a shout, and then another, but he walked on unheeding, carrying the food openly in his hands. There were footsteps hurrying towards him, and as he reached his wife someone gripped his shoulder, and he was in the hands of the police.

His first impulse was to release himself, but a glance at the sturdy man in uniform frightened him, and he tried to explain.

"My wife is starving. I have money in my pocket, but they will not take it. She must have food. Take the cost from my money and let us go."

He spoke in a dialect of his province with much gesticulation and turning of the shoulders, but the policeman stopped him with a jerk of his elbow.

"Come along o' me, my fine fellar, and tell all that to the magistrate."

Where his wife disappeared to Krishna did not know, for the crowd grew as he was hurried away, and he was not tall enough to see beyond the nearest of the people who pressed round him. The lock-up was comfortable, almost luxurious compared to his father's home, and the food made him wonder what sort of people he had fallen amongst; and had his wife been with him, had he but known where she was, or how she was faring, he would have been happy.

He spent a sleepless night, picturing her wandering about the streets, and in the morning he was taken before the magistrate.

Krishna was a thin, undersized man, and the hardships he had undergone had left their mark on his thin, shrunken cheeks, his unkempt hair, and worn clothes. He was, in fact, a good type of the undesirable alien.

The magistrate frowned when he was brought into the dock, and sighed deeply at the folly of the nation that permitted such men to enter the country.

The policeman, with well-oiled hair, and looking very spick and span, had detailed the greater part of his evidence before the clerk inquired if the prisoner understood what was being said. Then there followed the usual delay and difficulty in finding an interpreter, who was really no interpreter at all of the peculiar dialect that was Krishna's mother tongue, and the case was reopened.

The magistrate was patience itself, but as the interpreter, through his ignorance, entirely missed the point of Krishna's defence, there was no alternative but to convict.

"This is yet another case of a foreign pauper landing here without a ghost of a chance of earning his living except in crime," he said wearily, before sentencing him to fourteen days' imprisonment, to be followed by immediate deportation.

Krishna's meeting with his wife was a touching one, but neither of them had any complaint of the way they had been treated, and the woman who had spent the fourteen days at the workhouse was particularly voluble of the English people's kindness. Neither of them knew what was to happen to them, and they looked upon the deportation officer, who brought them together and provided them with breakfast, as an officer of charity sent by a beneficent Government to protect them.

It was only when they drove to the docks, and the officer left them in the charge of two policemen, whilst he entered their names in a book, that the truth flashed upon them, that they were to be sent on to the sea again, back to their native land to their own village, to the vengeance of the officer who had struck Krishna, to the horrors and death in Siberia.

Krishna clutched his wife's arm, and with a terrified look turned to the door. A wild idea of escaping entered his mind, but the sight of the policeman cowed him, and at a sign from the officer, he followed him meekly on to the ship.

It was a damp, foggy morning, and they sought refuge below, where, in a small, airless cabin they found others of their nationality, and learnt that their fears were true. As the ship was leaving an old seaman entered the cabin and gave each of them two sovereigns.

Krishna and his wife scarcely thanked

# 160 Acres

### Of Land for the Settlers in Northern Ontario.

Situated south of the G. T. P. Transcontinental Railway, south of Winnipeg, and 800 miles nearer the seaboard. A rich and productive soil, covered with valuable timber, it is rapidly increasing in value. For full information as to terms of sale, home-stead regulations, and for special colonization rates to settlers, write to:

**DONALD SUTHERLAND,**  
Director of Colonization,  
Parliament Buildings, Toronto, Ont.,  
or to **THE HON. MR. DUFF,**  
Minister of Agriculture.

## GRAND TRUNK RAILWAY SYSTEM

### Only Line Reaching All the Summer Resorts

- CHARMING MUSKOKA
- BEAUTIFUL LAKE OF BAYS
- GEORGIAN BAY
- TEMAGAMI
- ALGONQUIN PARK
- MAGNETAWAN RIVER
- FRENCH RIVER
- STONEY LAKE
- KAWARTHA LAKES
- LAKE COUCHICHING, ETC.

Round Trip Tourist Tickets on Sale at Low Rates.

Sailings of passenger steamers from SARNIA to SOO, PORT ARTHUR and DULUTH, every Monday, Wednesday and Saturday at 3.30 p.m. The Wednesday and Saturday steamers going through to DULUTH. Sailings from COLLINGWOOD 1.30 p.m., and OWEN SOUND 11.45 p.m., Wednesdays and Saturdays for SOO and GEORGIAN BAY PORTS. Sailings from MIDLAND 1.30 p.m., PENETANG 3.15 p.m., to PARRY SOUND and way ports daily, except Sunday.

Full information and tickets from E. RUSE, City Agent; H. M. HAYES, Depot Agent, London, Ont.



Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted, and Pet Stock.

TERMS—Three cents per word each insertion. Cash initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 50 cents.

AGENTS WANTED—Smart, active ladies to take orders in country districts for our famous Made-to-order Corsets and Skirts. Good commission. Apply: Robinson Corset & Costume Co., London, Ont.

FOR SALE—Iron, Pipe, Pulleys, Belting, Rails, Chain, Wire Fencing, Iron Posts, etc.; all sizes very cheap. Send for list, stating what you need. The Imperial Waste & Metal Co., Queen St., Montreal.

THE Canadian Apple-growers' Guide (just published).—A complete and up-to-date guide for success in apple-growing, from the planting of the tree to the sale of the fruit. By Linus Woolverton, M.A., Grimsby, Ontario. Published by Wm. Briggs, Toronto. Price \$2.25, postpaid.

VANCOUVER ISLAND offers sunny, mild climate; good profits for ambitious men with small capital in business, professions, fruit-growing, poultry, farming, manufacturing, lands, timber, mining, railroads, navigation, fisheries, new towns; no thunder storms; no mosquitoes; no malaria. For authentic information, free booklets, write Vancouver Island Development League, Room A, 102 Broughton St., Victoria, B.C.



WANTED—A few private farmers to ship me Poultry, Eggs, Dairy Butter, Syrup, and all other farm produce. Will pay highest market price. W. J. Falls, Prince Albert Ave., Westmount, Montreal.

Sunday school Teacher—"Now, children, the subject is the story of the Prodigal Son. Can anyone tell me who was glad when the prodigal returned?" "The father," was the unanimous response. "And who was sorry?" asked the teacher. "The 'fatted calf,'" promptly responded a little boy.

him; they thought the money was the price of their lives—perhaps a sop to the conscience of the nation that sent them back to their doom. It did not occur to them that their benefactor was one of their own people seeking to help the lowliest of his kind. Their fellow-passengers told them that they were sure to be sent to Siberia, unless, as one suggested, they were thrown into prison.

"They wait for such as us when we land. I and my friend intend to slip overboard the night we arrive. It is in the office where they catch us."

Neither Krishla nor his wife had heart for such a risk; the latter was very ill, and Krishla no longer thought in the manner of revolutionary tracts. They both longed for home, for the old tumble-down cottage in its poverty-stricken row, for its close, fetid smell, and for a sight of the old people. They were as dumb animals, and they were beginning to forget fear.

They were landed in the usual way. There was some difficulty at first, and they waited patiently to be made prisoners, but it was only a technical error in the way their names had been spelt, and after a few hours they were told they might go.

Places had been taken for them in a conveyance to their native village, paid for by the ever-beneficent British; but they accepted everything without surprise, or thought only that it was on the way to their undoing.

And so they arrived at their home. It was as they had left it, unaltered even to a detail, with the vodka cup on the shelf above the stove, as it had been since Krishla could remember.

They crept in, quaking with fear. Until they saw the old people they had been as though deadened; now the young woman fell weeping into her mother-in-law's arms whilst Krishla barred the door with shaking hands.

"We are come back, and no one has taken us. We have been seen by soldiers, yet we have been spared to return to you and see you once more before we are taken."

The old man embraced his son warmly. "Who do you fear?" he asked shortly.

"We fear them all," cried his son. "We have been sent back. I have been in prison. She starved, so I took what I saw, for which they would not be paid with our money. They have sent us back to the vengeance of the officer."

The old man looked at him from under his shaggy eyebrows.

"The officer is gone himself to Siberia."

"The officer—he—why?"

Krishla's father chuckled.

"Yes, he has gone like thousands more, to stay there for ever. He has gone to the war to fight the Japanese, but he is dead now this three weeks. One of the first he was. They put him in the front, and he was shot through the head. It was the blacksmith told me—he knows, for he can read."

Krishla said nothing for a moment, and then, falling upon his knees, he drew from his pocket the four golden coins that had been given to them on the ship and laid them at his father's feet.

"It is the Will of God who sent a good man to give us these in the Great England where all is kindness, even in the prisons, where they feed you well and let you sleep."—Norman RByers, in T. P.'s Weekly.

### GOSSIP.

J. B. Hogate is in the Old Country buying his new shipment of Clydesdale fillies and stallions and Percheron stallions and fillies, to supply both his Ontario and Western trade. He says he is going to buy the best he can find, both in France and Scotland. The kind of stallions both Eastern and Western horsemen are asking for, great big, heavy fellows, with plenty of size and substance, lots of clean, flat bone, and with plenty of quality and breeding. Mr. Hogate has always been advocating big stallions, and that's the kind he is after. He expects his new importation to arrive some time in September, and he cordially invites all lovers of good horses, either Clydesdale or Percheron stallions, to come and see his new importation, which will arrive shortly in his new stables at Weston, Ont.

A long list of special prizes for horses is added to the usual liberal premiums at the Canadian National this year. The string of ten horses has been divided into two classes, light and heavy, with prizes of \$100, \$50 and \$25 for each, and the Yorkshire Live-stock Insurance Co., of York, England, giving the additional prizes necessitated by the change. The Clydesdale Association give special cash prizes of \$40 each for the best heavy draft stallion and best heavy draft mare. The King Edward hotel gives two \$100 cups for best lady's turnout and best gentlemen's turnout. And there are dozens of others.

### ADDITIONAL HOLSTEIN-FRIESIANS ACCEPTED IN THE RECORD OF PERFORMANCE.

Canaan Queen (7264), two-year-old class: 10,106.75 lbs. milk; 318.4 lbs. fat; average per cent. of fat 3.15; number of days in milk 365. Owned by F. E. Came.

Shawasse Beauty 2nd (12157), mature class: 13,694.31 lbs. milk; 140.36 lbs. fat; average per cent. of fat 3.21; number of days in milk 365. Owned by H. Holbert.

Jesse Inka Keyes (6291), four-year-old class: 12,860.5 lbs. milk; 417.73 lbs. fat; average per cent. of fat 3.24; number of days in milk 362. Owned by J. A. Caskey.

Canaan Sherwood Orpha (7298), three-year-old class: 9,358.5 lbs. milk; 297.28 lbs. fat; average per cent. of fat 3.17. Owned by F. E. Came.

Betsy's Pearl (5733), four-year-old class: 16,759 lbs. milk; 504.39 lbs. fat; average per cent. of fat 3.00; number of days in milk 330. Owned by A. A. Johnston.

Rosa Belle B. (2275), mature class: 11,537.5 lbs. milk; 375.22 lbs. fat; average per cent. of fat 3.25; number of days in milk 315. Owned by David McDonald.

Carrie May (4179), mature class: 11,689.5 lbs. milk; 369.61 lbs. fat; average per cent. of fat 3.16; number of days in milk 365. Owned by F. E. Came.—G. W. Clemons, Secretary.

### QUESTIONS AND ANSWERS. Miscellaneous.

#### PIGPEN PARTITIONS.

We are building new piggens. Would you please let us know what makes the best division between pens. Wire fencing is apt to stretch, after it has been on a while, and, as for boards, the big pigs are apt to tear them down with their teeth. Any information will be gladly received. L. S.

Note.—Will readers give the benefit of their opinions and experiences regarding this problem. If the partitions are of 1 1/2- or 2-inch planks, we should judge there is little probability of them being torn down by the hogs.

#### SWEET CLOVER.

Weed enclosed grows in our hay field. SUB.

Ans.—You sent a poor specimen to judge by, but, from the bitter odor and leaves, it is evidently one of the sweet clovers, either the white or yellow melilot. These are rank-growing leguminous biennials, growing chiefly along roadsides and in waste places. They seldom give serious trouble in fields, being easily subdued by any treatment which keeps them from going to seed. They are soil-improvers, and in odd cases have been utilized for pasture, though stock will not eat them much if other herbage is available.

A commercial traveller driving from town to town through the pine woods of Florida, says Everybody's Magazine, saw a drove of emaciated razorback hogs rushing wildly from tree to tree. He halted at the palings of a "cracker's" home, and asked a woman in a sunbonnet what was the matter with the swine. "Well, you see," the woman explained, "my old man is deaf and dumb, and when he wanted to call the hogs to their swill he learned them to come when he tapped on one of the trees. It worked all right when they first got learned, but now them woodpeckers is makin' the poor things run their legs off."

# Barn Roofing

### Fire, Lightning, Rust and Storm Proof

### Durable and Ornamental

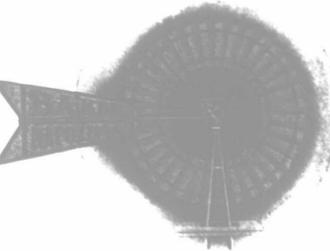
Let us know the size of any roof you are thinking of covering, and we will make you an interesting offer.

## Metallic Roofing Co.

(LIMITED) 45A  
MANUFACTURERS,  
TORONTO and WINNIPEG.

### "BAKER" Wind Engines.

The "BAKER" Wind Engine is built for heavy duty. Neat and compact in design. Do perfect work because they are built on principles that are absolutely correct, and the easiest-running mill made.



The wheel is built on a hub revolved on a long stationary steel spindle. As a result there is less friction.

It has a large number of small sails without rivets. The small sails develop the full power of the wind.

The engine is so constructed that the gears cannot wear out of mesh.

Has ball-bearing turntable, and self-regulating device.

All working parts are covered with a cast shield, thus protecting same from ice and sleet.

We make a full line of steel towers, galvanized steel tanks, pumps, etc.

All goods fully guaranteed. Write for catalogue No. 58.

THE HELLER-ALLER CO.,  
Windsor, Ontario.

## We Are Furnishing

# Fine Interior Woodwork

INCLUDING DOORS, ETC., IN

# PINE AND HARDWOOD

For many of Toronto's best homes. Write us for prices for anything in woodwork you may require for any class of building.

JOHN B. SMITH & SON,  
LIMITED,  
Toronto.

ESTABLISHED 1851.

## Proper Lubrication

On your plows, harrows and drills use

# Granite Harvester Oil



Insures better work from the new machine and lengthens the life of the old. Wherever bearings are loose or boxes worn it takes up the play and acts like a cushion.

Changes of weather do not affect it.

Gasolene and Kerosene Engines

### Standard Gas Engine Oil

is the only oil you need. It provides perfect lubrication under high temperatures without appreciable carbon deposits on rings or cylinders, and is equally good for the external bearings.

Steam Traction Engines and Steam Plants

### Capitol Cylinder Oil

delivers more power, and makes the engine run better and longer with less wear and tear, because its friction-reducing properties are exactly fitted to the requirements of steam traction engines and steam plants.

Traction Engines, Wagons, Etc.

### Mica Axle Grease

makes the wheel as nearly frictionless as possible and reduces the wear on axle and box. It ends axle troubles, saves energy in the horse, and when used on axles of traction engines economizes fuel and power.

Every dealer everywhere. If not at yours, write for descriptive circulars to

**The Imperial Oil Company, Limited**  
Ontario Agents: **The Queen City Oil Co., Ltd.**

## The Help the Farmer Longs for is Supplied by The Genuine Tolton Pea Harvester



### WITH NEW PATENT BUNCHER AT WORK

1. Harvesting in the most complete manner from ten to twelve acres per day.  
2. Harvesters to suit all kinds of mowers. Many thousands sold.  
**Every Machine Warranted. Our Motto: "Not how Cheap, but how Good."**  
No drilling holes in Mower Bar or Inside Shoe. A wrench is all that is required to attach it to any mower. Give your orders to any of our local agents, or send direct to  
**TOLTON BROS., LIMITED, GUELPH, ONTARIO**

BEST RESULTS ARE OBTAINED FROM ADS IN "ADVOCATE."

### QUESTIONS AND ANSWERS. Veterinary.

#### FEEDING ALFALFA TO HORSES

Is it dangerous to feed horses exclusively on alfalfa hay? S. E. C.

Ans.—When alfalfa is cut when quite green and well saved, feeding it exclusively (in reasonable quantities) to horses is not attended with danger, but when too ripe when cut, the fibre has become woody, and, to a greater or less extent, indigestible, and is likely to cause indigestion and constipation. The same danger exists to a less extent when the hay is not well cured, even though cut when green. Of course, horses do better when fed grains, in addition to hay of any variety. V.

#### BRUISES.

Mare fell into a ditch and bruised her head and body badly. I used hot salt and water until the skin broke, and then got a lotion from my veterinarian, but I think something to heal the parts should be applied, as they are getting worse. W. R.

Ans.—In cases of this kind the tissues that have been badly bruised and the circulation cut off by a wounding of the blood vessels will all slough off before the parts can heal. The extent of the injury cannot be told for some days after the accident. No doubt your veterinarian gave you a proper lotion. No application will heal the parts. All that can be done is to keep them clean and apply an antiseptic, as a five-per-cent. solution of carbolic acid, creolin, zenoleum, or other antiseptic. V.

#### BLOAT.

I had a valuable Ayrshire heifer calf that I fed yesterday morning a half-pail of skim milk with a small handful of linseed meal mixed; I also fed a little peas and oats provender. Last night, on going to the pen to feed, I found the calf lying dead. She was swollen, not only at the stomach, but all over, on the legs and neck. On cutting the skin, I could hear a noise like escaping air.

1. What is this disease?
2. Is it curative if taken in time?

OLD SUBSCRIBER.

Ans.—I am of the opinion the calf died of tympanitis, or excessive bloating. Just what caused the emphysema of neck and legs is hard to say. Probably during her struggles she cut or punctured the skin, and the air entered and filled the areolar tissue beneath the skin, but this did not cause death. It's not probable the trouble was black leg, as the calf evidently was not out on grass, nor yet fed grass, and the owner makes no mention of discoloration of the tissues.

2. Treatment when the bloating is excessive must be puncturing in the left side, just in front of the point of the hip, and allowing the gas to escape at once. When the bloating is not sufficiently great to cause death quickly, the administration of oil of turpentine and raw linseed oil should be practiced. In a calf about 1 oz. turpentine in 4 ozs. raw linseed oil would be about the proper dose. This may seem an excessive dose of turpentine, but in these cases large doses are needed. Baking soda would or should give fair results when turpentine is not at hand. V.

#### Miscellaneous

#### BOOK ON LIVE-STOCK JUDGING—FARMERS' INSTITUTES.

1. What books would you recommend as beneficial to a person in learning how to judge stock?  
2. Who is the person you would apply to for the purpose of getting a Farmers' Institute started in a new locality?  
3. What is the name and address of the person who has the engaging of Institute speakers?  
4. What remuneration do Institute-speakers generally get for their services? Ontario.

Ans.—1. Live-stock Judging, by Craig (price, through this office, \$2), paper is the best book for your purpose. If you wish to specialize on any particular class of stock, there are various books which would be helpful.

2, 3, 4. Write G. A. Patton, Secretary, Institute of Institutes, 1500 Queen Street West, Toronto.

### Horse Owners! Use



### GOMBAULT'S Caustic Balsam

A Safe, Speedy, and Painless Cure  
The safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle, SUPERSEDES ALL CAUTERY OR FIRING, Impossible to produce scar or Membrane. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars.  
The Lawrence Williams Co., Toronto Ont.

### Dr. Page's English Spavin Cure

For the cure of Spavins, Ringbone, Curbs, Splints, Windgalls, Capped Hock, Strains or Bruises, Thick Neck from Distemper, Ringworm on Cattle, and to remove all unnatural enlargements.

This preparation (unlike others) acts by absorbing rather than blistering. This is the only preparation in the world guaranteed to kill a Ringbone or any Spavin, or money refunded, and will not kill the hair. Manufactured by Dr. Frederick A. Page & Son, 7 and 9 Yorkshire Road, London, E. C. Mailed to any address upon receipt of price, \$1.00. Canadian agents:

J. A. JOHNSTON & CO., Druggists,  
171 King St., E. TORONTO, ONT.

### Fistula and Poll Evil

Any person, however inexperienced, can readily cure either disease with

#### Fleming's

#### Fistula and Poll Evil Cure

—even bad old cases that skilled doctors have abandoned. Easy and simple; no cutting, just a little attention every fifth day—and your money refunded if it ever fails. Cures most cases within thirty days, leaving the horse sound and smooth. All particulars given in

Fleming's Vest-Pocket  
Veterinary Advice.

Write us for a free copy. Ninety-six pages, covering more than a hundred veterinary subjects. Durable bound, indexed and illustrated.

FLEMING BROS., Chemists  
75 Church St., Toronto, Ontario

### KENDALL'S SPAVIN CURE

#### Sure Cure for Spavin

Seattle, Wash. Nov. 1st, 1909  
"I have used your Spavin Cure and find that it is a sure cure for Spavin and Ringbone."

Yours truly, A. T. Lynch.  
Equally good for Curbs, Splints, Sprains, Swollen Joints and all Lamenesses.

Hundreds of thousands of horse owners have used it in the past 40 years. Today, it is the world's standard remedy. Good for man and beast.

\$1. a bottle—4 for \$5. Buy at dealers and get free copy of our book—"A Treatise On The Horse"—or write us.

DR. B. J. KENDALL CO.,  
Evesburg Falls,  
Vt.

### HIGHLY-BRED GLYDESDALES

#### FOR SALE

Always on hand, stallions, colts, mares and fillies. The champion stallion, "Baron Howes" (13847), was purchased from this stud. Apply:

JOHN R. BEATTIE,  
Baurch Farm, Annan, Scotland.

### High-class Driving Ponies AND OUTFITS.

Twelve ponies, ranging in height from 10 hands to 13 hands, and of bay, brown, sorrel, black and pearly colors, and from 2 to 5 years of age. For prices and particulars write:

E. Dymott, Copetown, Wentworth Co., Ont.

"My dear," said the young husband as he took the bottle of milk from the dumb-waiter and held it up to the light, "have you noticed that there's never any cream in this milk?"

"I never to the milkman about it," she replied, "and he explained that the company always fill their bottles so full that the cream runs to the bottom."

**ers! Use**  
**BOMBAULT'S**  
**Caustic**  
**alsam**

**English**  
**Cure**

Ringsome, Curbs,  
Hock, Strains, or  
Distemper, Ring-



or any Spavin, or  
not kill the hair,  
erick A. Page &  
oad, London, E. C.  
on receipt of price.

CO., Druggists,  
TORONTO, ONT.

**ula**



perienced,  
horse with  
Cure

ill'd doctors  
simple; no  
ion every fifth  
ed if it ever  
in thirty days  
d smooth. All

ected  
face.

y. Ninety-six  
an a hundred  
urably bound,

Chemists  
nto, Ontario

**VIN CURE**

Spavin  
sh. Nov. 1st, 1909  
and find that it is  
bone."

uly, A. T. Lynch,  
Sprain, Swollen

owners have used  
It is the world's  
man and beast.

dealers and get  
realize On The

CO.

**YDESDALES**

es, colts, mares  
stallion, "Baron  
hased from this

IE,  
Annan, Scotland.

ing Ponies  
TS.

at from 10 hands to  
rrel, black and pie-  
ears of age. For

tworth Co., Ont.

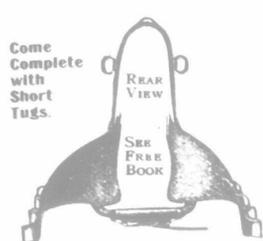
ing husband as  
from the dumb-  
the light, "have  
never any cream

about it" she  
d that the com-  
les so fat, that  
room to use."

**All Horse-Collar Troubles Now Prevented or Quickly Cured**

Every horse-owner who will now consider the practical in valuable time and horseflesh by using a set of HUMANE HORSE COLLARS to prevent all collar troubles, will certainly buy a set with his spring harness. Or get a set to cure your sore horses while they work. The success of the HUMANE HORSE COLLARS for the past three years proves this. Investigate.

**HUMANE HORSE COLLARS**



Come Complete with Short Tugs.

It is a fact that only one set of HUMANE HORSE COLLARS on a farm will cure up and keep cured of collar troubles, all your horses. Don't use "sweat pads," it's cruel, especially in hot weather - injures your horses; and besides, the sweat pads cost you more than most collars before you get through. You don't need them with these collars. Every set comes complete with short tugs and ready to use - less trouble to put on and take off - and fit any horse perfectly all the time by simple adjustment. Built to last for years by expert workmen, and durable materials.

Don't think of buying your spring harness until you write or fully investigate THE HUMANE HORSE COLLARS. Get our book first.

**WHIPPLE HORSE COLLAR COMPANY, LIMITED**  
Hamilton, Ontario.

**UNION STOCK - YARDS Horse Exchange**  
WEST TORONTO, CANADA.

The Greatest Wholesale and Retail Horse Commission Market.

Auction sales of Horses, Carriages, Harness, etc., every Monday and Wednesday. Horses and harness on hand for private sale every day.

The largest, best equipped and most sanitary stables in Canada. Half-mile of railway loading chutes at stable door. Quarter-mile open track for showing horses. Northwest trade a specialty. HERBERT SMITH, Manager. (Late Grand's Repository.)



**T. H. HASSARD'S NEW IMPORTATION!**

**Clydesdale Stallions and Mares** I have still some extra good Clydesdale stallions, and fifteen imported and registered mares. The mares have all been bred, are all up to a big size, 2 and 3 years old, and are of choice Clydesdale breeding. C. P. R. and phone connection.

**T. H. Hassard, Markham, Ontario**

**OUR NEW IMPORTATION OF Clydesdale Stallions and Mares**

Landed May 20th, consisting of three 4-year-old mares, four 3-year-olds, and two 2-year-olds, by such sires as Baron's Best, Baron Millar, Baron Cedric, Dryden, Benedict, and Dunure Blend, and a few stallions by such sires as Baron's Pride, Everlasting, Ruby Pride, and Majestic Baron. These are the best collection of stallions and mares we have ever had, full of quality and size. Phone connection. **R. NESS & SON, HOWICK, QUEBEC.**

**CLYDESDALES AND HACKNEYS**  
We have still for sale several good Clydesdale Stallions; also our prizewinning Hackney stallion, Blanch Surprise, and a few good Clydesdale and Hackney mares. All of which will be sold on reasonable terms. Phone connection.  
**JOHN A. BOAG & SON, Bayview Farm, Queensville, Ont.**

**CLYDESDALES, Imported and Canadian-bred.** I have on hand 2 Imported Clydesdale Stallions, one 4, the other 5 yrs. old; 2 Canadian-bred Clydesdale Stallions, one 2, the other 3 yrs. old; one French Coach Stallion, 4 yrs. old; one Shire Stallion, and the noted Hackney Stallion, Chocolate Jr. I will sell these horses cheap for quick sale. **T. D. Elliott, Bolton, Ont.**

**WAVERLY CLYDESDALES AND HACKNEYS**  
My 1910 importation of Clydesdale stallions and fillies, and Hackney stallions and fillies, are now in my barns. One and two-year-old Clyde fillies of a character and quality never before excelled. My Hackney stud was never so strong in high-class animals. All are for sale and prices right. **ROBT. BEITH, BOWMANVILLE, ONT.**

**IMPORTED CLYDESDALES AND HACKNEYS**  
In my stables at Ingersoll, Ont., I have always on hand Clydesdale stallions and fillies, and Hackney stallions, personally selected in Scotland for their high-class type, quality and breeding. Let me know your wants.  
**W. E. BUTLER, INGERSOLL, ONT.**

**IMPORTED CLYDESDALE FILLIES**  
I have still on hand six Clydesdale fillies. They are big, smooth fillies, exceptionally well bred, and their underpinning is the kind Canadians like. I have only one stallion left, a right good one. My prices are as low as any man's in the business. Phone connection.  
**GEO. G. STEWART, HOWICK, QUEBEC.**

**Ormsby Grange Stock Farm, Ormstown, P. Quebec.**  
Importation and breeding of high-class Clydesdales a specialty. Special importations will be made for breeders at minimum cost. My next importation will arrive about June 1st.  
**Duncan McEachran.**

**Imported Clydesdales** My new importation of Clydesdale stallions for 1910 have arrived. They were selected to comply with the Canadian standard, combining size, style, quality and faultless underpinning with Scotland's richest blood. They will be priced right, and on terms to suit. **C. W. BARBER, GATINEAU PT., QUEBEC.**

**SMITH & RICHARDSON**  
are in Scotland at present purchasing more Clydesdales. Watch this space for further announcement. Myrtle, C. P. R., Brooklin, G. T. R. Phone.

**SMITH & RICHARDSON, COLUMBUS, ONTARIO.**

**CLYDESDALE FILLIES OF QUALITY** Our new importation of 12 fillies have arrived at our stables; 1, 2 and 3 years of age. Superior type, character, breeding and action, coupled with the flashiest kind of quality, are their outstanding merits. All are for sale.  
**HODGKINSON & TISDALE, BEAVERTON, ONTARIO**

**ELM PARK Clydes, Aberdeen-Angus and Suffolks.** We have at present six Clyde mares recorded in both Canadian and American Studbooks. Three of them sired by Lord Charming [2264], and two by a son of Lord's Montreuil Marquis [6735]. Our cattle number fifty-five head of both sexes. Our Suffolks are doing well, and flock numbers sixty-seven. **James Bowman, Elm Park, Guelph, Ont.**

**GOSSIP.**

**HIGH-CLASS FILLIES IMPORTED.**

Messrs. Hodgkinson & Tisdale, of Beaverton, Ont., have lately landed at their stables their 1910 importation of twelve Clydesdale fillies. The international reputation of this firm as importers, breeders, and handlers of high-class Clydesdales, is second to none other in the business in Canada, and this lot is right in line with the class of stock always to be found in their stables. Their superior quality, big size, draft character, and straight, faultless action, will be a revelation to parties looking for something extra in Clydesdale fillies, either for breeding or show purposes. In the matter of age, there are two three-year-olds, eight two-year-olds, and two yearlings. Black Tilda [22701] is a black three-year-old, by the many times Canadian and American champion, Sir Marcus, dam by the world-renowned Macgregor. This breeding is unsurpassed, her two nearest sires being two of the greatest show horses the breed has known, and she has all the qualifications of a coming champion, size, smoothness, and flashy quality of underpinning and action. The other three-year-old is a roan, Dunsuir Radiant [22701], by the Glasgow Premium horse, Clan Chattan, dam by The Summit, by Sir Everard, g.d. by Prince Robert, sire of Hiawatha. This filly will make them all step some when put in condition. Her underpinning is perfect, and of choice quality; she has also the size, form and character of a typical draft mare. Victorine [22700] is a bay two-year-old, by the noted prize horse, Count Victor, dam by Baron's Pride, grandam by Macgregor. The superior showing quality of this filly, coupled with her right royal breeding, will certainly make a name for her, and honors for her owner. One of the best show propositions of the lot is the brown two-year-old, Bernfer Favor [22702], by Royal Favorite, dam by the noted prize and breeding horse, Baron Mitchell, grandam by Prince Victor. She is smooth to a turn, choke-full of quality, and moves like a machine. Lady Bain [22679] is a bay two-year-old, by Faraway Blend, dam by Loudon King, grandam by Lord Cathcart. This filly is a most sensational mover, her action being true, straight and snappy. She has quality enough and to spare, and has a deal of character; she just about fills the bill for an ideal draft filly. Jean Wright [22705] is a bay two-year-old, by Douglas Chief, dam by Baron's Pride, grandam by Macgregor. Myoma [22708] is another bay two-year-old, by the invincible champion, Everlasting, dam by Prince of Earnock, grandam by John Bright. Here are a pair of big, flashy fillies, that will take some beating in any company. The other two-year-olds are Mary of Auchgoyle [22707], by Baron's Chief, the H. & A. S. winner, dam by Silverwood, grandam by Toward Castle. Miss Kepple [22698], by Royal Favorite, dam by Noble Lad, grandam by Prince Romeo. Miss Fotheringham [22699], by Argosy, dam by the H. & A. S. champion, Rosedale, grandam by Crusader, complete the list of two-year-olds. The yearlings are: Lady Sweet [22706], by Baden-Powell, dam by Baronson, by Baron's Pride, grandam by the Cawdor Cup champion, Prince of Carruban. The other is Baroness Humphrey [22703], by Sir Humphrey, dam by the Cawdor Cup champion, Prince Alexander, grandam by the £3,000 Prince of Albion. All these fillies are for sale. Those not sold will be out for honors at Toronto. It is not saying too much to state that this is probably the best lot of quality fillies ever imported by any one firm.

**WITH MANY NAMES.**

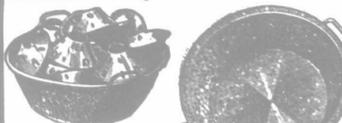
Money is "tin" to the roofer.  
To the butcherman it is "bones."  
The circus man speaks of his "rhino,"  
"Quids" the tobacconist owns.  
"Chink" doth the laundryman term it.  
Taxidermists "the stuff."  
It's "dough," of course, to the baker.  
And "bucks" to the hunter rough.  
The cobbler refers to his "booty."  
Of his "wad" the gunmaker talks.  
It is "plunks" to the banjo teacher.  
And the quarryman calls it "rocks."

**Deserve To Be Laughed At**

Makers and agents of common cream separators tempt you to laugh at them. They foolishly assume that you are ignorant of modern separator construction when they ask you to believe that their out-of-date cream separators, containing 40 to 60 disks, or other parts as bad, are modern. They deserve to be laughed at for trying to hide the facts and for failing to realize that you know, as well as they do, that

**Sharples Dairy Tubular Cream Separators**

contain neither disks nor other contraptions, yet produce twice the skimming force, skim faster, skim twice as clean, wear longer and wash several times easier than their common machines. And you know that iron-clad patents alone prevent them from imitating Tubulars.



The full pan contains disks from one common separator. The other pan contains the only piece used inside Sharples Dairy Tubular bowls.

The manufacture of Tubulars is one of Canada's leading industries. The World's Best. Sales easily exceed most, if not all, others combined. Probably replace more common separators than any one maker of such machines sells.

Write for Catalogue No. 193.

**THE SHARPLES SEPARATOR CO.**  
TORONTO, ONT. WILMINGTON, MASS.



**HOUSE FLIES** are hatched in manure and revel in filth. Scientists have discovered that they are largely responsible for the spread of Tuberculosis, Typhoid, Diphtheria, Dysentery, Infantile Diseases of the Bowels, etc. Every packet of

**WILSON'S Fly Pads**

will kill more flies than 300 sheets of sticky paper.

**ABSORBINE**

Cures Strained, Puffy, Ankles, Lymphangitis, Poll Evil, Fistula, Sores, Wire Cuts, Bruises and Swellings, Lameness, and allays Pain quickly without Blistering, removing the hair, or laying the horse up. Pleasant to use. \$2.00 per bottle, delivered. Horse Book 5 & Free. **ABSORBINE, JR.**, (mankind \$1.00 and \$2.00 bottle). For Strains, Gout, Varicose Veins, Varicocele, Hydrocele, Prostatitis, Eklis pain. Your druggist can supply and give references. Will tell you more if you write. Manufactured only by **W. F. YOUNG, P. O. F. 258 Temple St., Springfield, Mass.** Canadian Agents: **Lyman's Ltd., Montreal.**

**MESSRS. HICKMAN & SCRUBY**  
Court Lodge, Egerton, Kent, England.

Exporters of pedigree live stock of every description. Draft horses a specialty. During the summer months we shall export large numbers of cattle and sheep for breeding and show purposes. We attend all the leading fairs and sales, and can buy cheaper and ship cheaper than can anyone not living on this side. Correspondence invited.

**ABERDEEN - ANGUS**

Will sell both sexes; fair prices. Come and see them before buying. Drumsbo station.

**WALTER HALL, Washington, Ont.**

**ABERDEEN - ANGUS CATTLE**

5 choice yearling bulls for sale at reasonable prices. Also females any age. Parties requiring such will get good value. Correspondence invited.  
**GEO. DAVIS & SONS, ALTON, ONT.**

When Writing Mention This Paper.

# Ring-Bone

There is no case so old or bad that we will not guarantee

## Fleming's Spavin and Ringbone Paste

to remove the lameness and make the horse go sound. Money refunded if it ever fails. Easy to use and one to three 45-minute applications cure. Works just as well on Sidebone and Bone Spavin. Before ordering or buying any kind of a remedy for any kind of a blemish, write for a free copy of

## Fleming's Vest-Pocket Veterinary Adviser

Ninety-six pages of veterinary information, with special attention to the treatment of blemishes. Durably bound, indexed and illustrated. Make a right beginning by sending for this book.

FLEMING BROS., Chemists, 75 Church St., Toronto, Ontario

## BUY THIS WAGON



Dominion Wagons are strong, low, loaded easier than high wagons. Changed to platform pattern instantly, easily. Halves labor. Saves time. Easy on horses. Easy on your pocketbook. Built to last. Can't break. Can't rot. Cuts repair bills.



Dominion Wide-tire Low Steel Wheels, best for stony or muddy roads. Cheaper, lighter than wood. No setting tires. Cold proof. Last a lifetime. Fit all axles. Write for free catalogue now.

Dominion Wrought Iron Wheel Co., Limited, Orillia, Ontario.

**SHORTHORNS AND LEICESTERS.** Present offering: Eight choicest bred one and two-year old heifers, also bull calves. Choice shearing rams and ram and ewe lambs. Show material. Write: **W. A. Douglas, Tuscarora, Ont. Caledonia Station.**

As one of the White Star steamships came steaming up New York harbor the other day, a grimy coal barge floated immediately in front of her. "Clear out of the way with that old mud-scow," shouted an officer on the bridge.

A round, sun-browned face appeared over the cabin hatchway. "Are ye the captain of that vessel?"

"No," answered the officer.

"Then spake to yer equals. I'm the captain o' this!" came from the barge.

"The Lady Fate. You cannot cheat me, my man. I haven't ridden in cabs for twenty-five years for nothing."

"The Cabby. Haven't you, mum? Well, you've done your best."

## Was Troubled With His Liver For Four Years. Doctors Gave Him Up.

### MILBURN'S LAXA-LIVER PILLS CURED HIM

Mr. Harry Graves, Junkins, Alta., writes: "I can not say enough in regard to your wonderful Milburn's Laxa-Liver Pills. For four years I was troubled with my liver, and at times it would get so bad I could not move around. At last the doctors gave me up saying it was impossible for me to get cured."

My father got me four vials of your Milburn's Laxa-Liver Pills, but I told him there was no use trying them and that it was only a waste of money, however I took them and today, six months later I am a well man and weigh twenty-four pounds more than I did. I have never taken all liver pills since to use them."

Milburn's Laxa-Liver Pills are 25 cents a vial, or 5 vials for \$1.00, at all dealers, or sent by a led direct on receipt of price by The E. Milburn Co., Limited, Toronto, Ont.

## QUESTIONS AND ANSWERS. Miscellaneous.

### POLLUTING A CREEK.

A cheese factory is situated within six or eight rods of a creek running through a farmer's field. Can the farmer prevent the wash water from this factory running into said creek? F. J., Ontario.

Ans.—It is probable that he can. He ought to forbid the factory company's allowing the "wash-water" to enter the creek, and, if necessary, instruct a solicitor to write them, proposing an injunction from the Court.

### FLY MIXTURES—FEED FOR NURSING MARE.

1. Please give a recipe for a wash to spray on cattle to keep off flies. I thought some prepared stuff, but as it contained tar it would not go through sprayer.

2. Have a mare raising a pair of twin colts. Would oil cake be good to feed colts as well as mare, or what grain ration would be best? W. T. H.

Ans.—A proprietary specific that gives very good results has for several years past been advertised in "The Farmer's Advocate." A homemade formula that has been used in Virginia and is said to have given good results is kerosene emulsion, fifteen gallons of diluted emulsion, prepared from 2 of a pound of soap and 1 1/2 gallons of kerosene, being sufficient to treat one hundred cattle. It must be sprayed on at least once a day. As a rule, we believe, better satisfaction is derived from one of the mixtures applied with a brush. A good one is fish oil, 1/2 gallon, coal oil, 1/2 pint; crude carbolic acid, 4 table-spoonfuls, mixed and applied to all parts, except the udder once or twice a week. Prof. Grisdale, at Ottawa, has recommended in preference to all other mixtures he has tried, a mixture of ten parts lard and one of pine tar, stirred thoroughly together and applied twice a week with a brush or bit of cloth to the parts most attacked by the flies.

2. A little oil cake fed to the mare would be excellent, but do not feed her very much. Oats and bran mixed with not over half a pound a day of oil cake and good pasture should shove your foals along. A very little might also be allowed the foals, mixed with oats and bran, which they should be taught to eat as soon as possible.

### PAINTING INSIDE OF STAVE SILO.

I intend building a stave silo some time this summer, and have the material all planned and ready to put up, and in order to keep the staves from rotting in a few years' time, I have been thinking of giving them a good heavy coat of paint, or a coat of coal tar, before putting the silo together.

1. Which of the above would be the best to use?

2. Would there be any danger of the paint or tar tainting the silage so that the stock would not eat it, and would there be any danger of poisoning the silage from the use of either?

### A WELLSLAND CO. SUBSCRIBER.

Ans.—As supplementing our own opinion, we have spent considerable time consulting references on this point, and the net result is to suggest the advisability of not using any paint or preservative at all. No authority that we have seen recommends painting or treating the inside, though the outside may be painted for appearance sake. Prof. Shaw, in his book on Soiling Crops, and the Silo, states that it has been of doubtful advantage, sometimes being considered a disadvantage. King suggests an explanation, as follows: "It is impossible to so paint a wood lining that it will not become wholly or partly saturated with the silage juices. This being true, when the lining is again exposed, when feeding the silage out, the paint greatly retards the drying of the woodwork, and the result is decay set in, favored by the condensed dampness. For this reason, it is best to leave a wood lining naked, or to use some antiseptic which does not form a waterproof coat." See the staves of a silo in front of a barn, a family will up all the woodwork. So far as affecting the silage, we should not care to offer any opinion, but we should not care to advise painting the inside of a silo with any preservative.

## 275 BURLINGTON SHORTHORNS 275

3 Choice Imported Scotch Shorthorn Bulls—yearlings.  
1 Imported 2-year-old Bull, red—an extra sire.  
10 Bulls, 9 to 16 months old—all by imported sire.  
30 Choice Young Cows and Heifers—mostly bred or have Calves at foot. Long-distance telephone. Farm 1/4 mile from Burlington Jct. Sta., G. T. R. **J. F. Mitchell, Burlington, Ont.**

**SCOTCH SHORTHORNS**—Eight extra good young bulls, from 10 to 15 months old; 20 choice cows and heifers, forward in calf or with calves at foot. Prices reasonable. Inspection invited. **W. G. PETTIT & SONS, Freeman, Ont.**

**INVERNESS SHORTHORNS**—I can supply Shorthorns of all ages, with richest Scotch breeding and high-class individuality. **W. H. BASTERBROOK, Freeman, Ont.**

**Maple Leaf Shires, Shorthorns, Hampshire Hogs**—1- and 2-yr. old Shire stallions, females from yearling fillies up; Shorthorns, both bulls and heifers; a choice lot of young Hampshire pigs, both sexes, beautifully belted. **PORTER BROS., APPLEBY P.O., BURLINGTON STA. Phone.**



## Shorthorns (Scotch)

Cows imported and home-bred, either in calf or with calf at foot. Royally bred and right quality. Catalogue. **John Clancy, Manager. H. CARGILL & SON, Cargill, Ont.**

## Scotch Shorthorns

At Toronto Exhibition this fall yearling bulls bred by us won 1st and 3rd in class and junior champion. We also bred the sire of these bulls. The grand champion steer at Guelph was sired by a bull of our breeding. We have 10 young bulls for sale now, bred the same. Write for breeding and prices.

**John Miller, Brougham P. O., Ontario.** Claremont Stn., C. P. R., 3 miles.



**Glenburn Stock Farm**  
Shorthorns, Shropshires, Berkshires, and Barred Plymouth Rocks.  
**JOHN RACEY, Lennoxville, Quebec.**

## A. Edward Meyer

P. O. Box 378, Guelph, Ont.  
Breeds **SCOTCH SHORTHORNS** exclusively. Twelve of the most noted Scotch tribes have representatives in my herd. Herd bulls: Scottish Hero (imp.) = 53042 = (9065) 295765 A. H. B.; Gloster King = 68703 = 28,800 A. H. B. Young stock for sale. Long-distance phone in house.

## GEORGE D. FLETCHER, BINKHAM P. O., ONT.

Offers a few choice **Shorthorn Cows** at bargain prices, bred to stock bull, Benachie (imp.) = 69854 =, also Shorthorn heifer calves. Three Clydesdale fillies 1 and 2 years old; and Yorkshire sows ready to breed. **Erin Shipping Station, C. P. R.**

**The Show Time for All Live Stock and the Breeding Time for Sheep is Coming** I can furnish young Shorthorn bulls, females all ages, and Shropshire and Cotswold sheep that will be a credit to you in the show-ring, and will breed well for you also. I also have some beautiful children's ponies. Write and say what you want. **Robert Miller, Stouffville, Ontario.**

## PLEASANT VALLEY SHORTHORNS

For sale: 1 red, 1 roan, 2-year-old show bulls. Several good bull calves, also some yearling heifers. Some show propositions among them. If interested, write or call and see us before buying. **GEO. AMOS & SONS, MOFFAT, ONTARIO.** Farm 11 miles east City of Guelph on C. P. R., 1/2 mile from farm.

## HAWTHORN HERD OF IDEAL PURPOSE

**Shorthorns**  
For sale: Young cows and heifers; bred right; priced right; and the right kind. Come and see them.

**Wm. Grainger & Son, Londesboro, Ont.**

## CHOICE SCOTCH BULLS FOR SALE. HERD-HEADING QUALITY.

**H. SMITH R. R. 3, Hay, Huron Co., Ont.** Farm adjoins Exeter, on G. T. R.

## IRVINE SIDE SHORTHORNS

5 good young bulls under one year, also heifers. All sired by imp. Pride of Scotland. Strong show material in this lot. Prices moderate. Correspondence solicited. **J. Watt & Son, Salem P. O., Elora Station, C. P. R. or G. T. R.**

## HIGH-CLASS SHORTHORNS

I have on hand young bulls and heifers of high-class show type, pure Scotch and Scotch-topped, sired by that sire of champions, Mildred's Royal. If you want a show bull or heifer, write me. **GEO. GIER, Grand Valley P.O. and station, also Waldemar station.**

## Spring Valley SHORTHORNS

We have for sale Newton Ringleader (imp.) = 73783 =. A good bull, with first-class breeding. Also a Canadian-bred 15-month-old bull of the choicest quality. Phone connection. **Kyle Bros., Ayr, Ont.**

## SALEM SHORTHORNS

I have generally what you want in choice Shorthorns. **Elora Station, G. T. R. and C. P. R. J. A. WATT, SALEM.**

## CRUICKSHANK NONPAREILS

by private sale, 11 head, 5 cows, 4 of them young, by imp. sires; 2 yearling and 22-year-old heifers; 1 2-year-old and 3 yearling bulls. All in prime condition, and choice animals. The best and most richly bred lot for sale today in Canada. **W. D. Robertson, Oakville, Ont.**

## SHORTHORN FEMALES

OF ALL AGES FOR SALE. Prices to suit all kinds of customers. Have one red eleven-month-old bull left, a Clonca, price \$100. **J. T. GIBSON, DENFIELD, ONTARIO.**

## For Sale or Exchange Shorthorn Bull.

Imp. Scotch Prince 6989 =, in good breeding condition. I will sell reasonable, or exchange him for an imported bull for breeding purposes of a good family and a stock producer, to avoid inbreeding. **E. A. GARNHAM, Stratfordville P. O. 1/2 Bloor Street, C. P. R.**

## Maple Hall Shorthorns

Are bred on most fashionable Scotch lines, and are of high individuality. For sale are 4 young bulls from 1 to 12 months old. A good black sow, etc. Also 10 yearlings and 10 two-year-old heifers, show material, all of them. Telephone connection. **DAVID BIRRELL & SON, GREENWOOD P. O., ONT. CLAREMONT STATION.**

## ORCHARD GROVE HEREFORDS

Young bulls, cows, and heifers, bred on the most fashionable lines, and of high quality and most fashionable breeding. **L. O. CLIFFORD, Oshawa, Ont.**

QUESTIONS AND ANSWERS. Miscellaneous.

WAGES FOR BROKEN TERM - MILKING.

If I have man hired for seven months, can he leave after working three months, and collect wages, it being beginning of haying? If I hire another man, can I claim extra wages I would have to give to another man for remainder of his time—or his father, as he is not of age?

2. Is it a hired man's place to help milk, it not being mentioned in the bargain?

SUBSCRIBER

Ans.—1. You would be quite justified in deducting from the wages paid for the three months' service, a sum that would be reasonable to recoup you for the loss directly incident to his breaking of the contract. Your man (or his father), in such event, could not legally claim full pro rata wages for the time put in. Your proposition seems reasonable.

2. In the absence of specific agreement to the contrary, the employee might be legally and reasonably expected to help milk.

MATERIAL FOR CEMENT WALK

How much gravel and cement would be required to lay 70 rod of sidewalk, 3 1/2 feet wide? In what proportion should it be mixed, also, would four inches be thick enough? Would you advise putting gateways thicker?

H. M.

Ans.—If your soil is well drained, and there is little risk from heaving to be apprehended, four inches may be thick enough, but unless you have a long distance to haul gravel, or a big price to pay for it, we would recommend a depth of four and a half or five inches. A bottom layer of three inches, and a finishing coat of 1 1/2, should answer nicely. However, acting upon your suggestion, we have made calculations for a thickness of four inches, the bottom 2 1/2 inches being mixed 1 to 10, and the upper layer of 1 1/2 inches mixed 1 to 2. At this rate, about 55 cubic yards of gravel and 88 barrels Portland cement would be required. Gateways had better be thicker, and with a heavier surfacing of rich cement. If the bottom coat of the whole walk is made 3 inches instead of 2 1/2, allow for an extra seven yards of gravel and five barrels of cement.

BINDWEED—ST. JOHN'S WORT.

Could you tell me what the two enclosed weeds are? The yellow kind we have had on the farm for some time, but the other we have never seen before it came up in a field of fall wheat which was seeded down this spring with clover. There is just about a square rod of it all in one spot, have noticed that the flower closes up in afternoon, and is a great climber. Think of cutting wheat just where weed is and feeding it to hogs in orchard. If so, would seed grow?

C. D.

Ans.—The yellow weed which you submit is common St. John's Wort. It is a perennial that scatters mostly by its seeds. It is not usually considered a noxious weed, and is easily eradicated by cultivation. The trailing plant which you submit is field bindweed, or wild morning glory (Convolvulus arvensis L.), one of the most offensive of weeds. It is perennial, deep-rooted, with extensive, cord-like, creeping, fleshy rootstocks that throw up numerous slender branching and twining smooth stems, which form thick mats on the surface of the land, twisting around the plants, and choking them out. It propagates by seeds, and running rootstocks, a portion of which will produce new plants when broken by the plow. It is hard to eradicate, and must be attacked persistently. The usual plan is to follow or plant a hoe crop, and to follow hoe the land infested every 10 days for the entire season, keeping the leaves even from forming. At first the plants seem to thrive, but by the end of the season you will exhaust it. In some cases you have only a small bed of weeds, which may succeed by smothering with a heavy mulch, or by holding down at the stalks with this weed, no chance of escape.

Big Reduction in Dairy Scales Prices Almost Cut in Two

NO ORDERS FILLED AFTER 1ST AUGUST

A sudden break in the market has enabled us to buy 1,000 Chatillon's Improved Spring Balance Milk Scales (which are recommended by the Dominion Government) in addition to Household Scales, which we are willing to sell to every reader of this paper at a saving of 50c. on the dollar.

With these Milk Scales you can tell exactly what profits you are getting from each cow, or if you are keeping any cow at a loss. You can't afford to be without a Chatillon Scale.

Every Scale bears the Government stamp certifying accuracy. The Milk Scales are made in two different sizes, the Household Scales in three sizes.

60-lb. Circular Spring Balance Milk Scale, marked in decimals and always sold at \$7. Our special price	\$4.50
30-lb. Circular Spring Balance Milk Scale, marked in decimals and always sold at \$5. Our special price	3.50
25-lb. Straight Spring Balance Household Scale, marked in half pounds and always sold at 75c. Our special price	.38
50-lb. Straight Spring Balance Household Scale, marked in one pounds and always sold at \$1.10. Our special price	.59
40-lb. Straight Spring Balance Household Scale, marked in half pounds. Sold regularly at \$1.25. Our special price	.75

This is a special offer, and will be positively withdrawn after 1st August. Send us your order for whichever scale you need at once. Catalogue of Dairy Supplies free.

W. A. DRUMMOND & CO., 175 KING ST. EAST, TORONTO



Farmers and Cattlemen, Read This!

When you cannot sell your export cattle at satisfactory prices at home, and wish to ship them to the Old Country markets, write or wire for steamer space, market and shipping information to Donald Munro, Live Stock Forwarding Agent and Commission Salesman, 43 St. Sacramento Street, Montreal.

Load your cattle carefully, and bill them to me. I provide the necessary feed, insurance, etc., pay freight and all other expenses from shipping point, and give liberal cash advances on all consignments. Cattle are loaded on steamer under my personal supervision, and placed in charge of capable attendants for the ocean voyage. I represent the most reliable salesmen at all the different British markets. BUSINESS ESTABLISHED 1890. REFERENCES: THE MOLSONS BANK, MONTREAL.

SHORTHORN BULLS

I have some choice young bulls, from imp. sire and dams. Good ones at reasonable rate. Come and see them. Prices right. Also some choice heifers.

J. Brydone, Milverton, Ontario. G. T. R. and C. P. R. Station.



Willow Bank Stock Farm SHORTHORNS AND LEICESTERS.

Herd established 1855; flock 1848. The great Dutch-bred bull, Imp. Joy of Morning = 32070=, and the Missie bull, Royal Star = 72502=, heads my herd. Choice selections to offer at all times in both bulls and females.

JAMES DOUGLAS, CALEDONIA, ONTARIO.

SHORTHORNS BERKSHIRES One choice young Lady Fanny bull for sale—good herd header; also several young heifers. A few prizewinning Berkshires, both sexes. Write or come and see them. Prices moderate. ISRAEL GROFF, ELMIRA, ONTARIO.

LAKEVIEW HOLSTEINS!

Bull calves sired by Count Hengerveld Fayne de Kol, whose sire is the sire of the world's champion milk cow, and whose dam is the dam of the world's champion butter cow. These calves are from A. R. O. cows with records up to 24 lbs. butter in 7 days. Also a few females for sale.

E. F. OSLER, Bronte, Ont.

World's Champion-Bred Bull

Grace Fayne 2nd Sir Colantha. His dam, sire's dam and two sisters average 31.80 lbs. butter in 7 days. For further particulars send for catalogue. Address M. L. HALEY or M. H. HALEY, Springford, Ontario.



High-class Holsteins

Head of herd, Pietje Korndyke Lad. Two nearest dams average 26.09 lbs. butter in 7 days. His sire's dam, Pietje 22nd, has a record of 31.62 lbs. butter in 7 days. Present offering: now booking orders for bull calves sired by above sire and out of A. R. O. dams. WM. C. STEVENS, PHILLIPSVILLE, ONT.

High-class Holsteins and Tamworths.

I am now offering a number of two and three year old heifers, with official records from 11 to 20 pounds butter in 7 days; also bull calves with rich backing. Tamworth boars from 6 weeks to 1 year old—imp. sire and dam. A. C. HALLMAN, BRÉSLAU, ONT.

Elmwood Holsteins

Chicely-bred calves for April and May delivery. Sired by imported Ykema Sir Posch and Pontiac Sarcastic, a grandson of Sarcastic Lad. Registered. Delivered. Express paid. Safe delivery guaranteed. E. D. GEORGE & SONS, PUTNAM, ONT.

Spring Bank Holsteins and Yorkshires

For sale: 1 cow, 6 years old, good producer; 3 bull calves; young Yorkshire sows. Wm. Barnett & Sons, Living Springs, Ont. Fergus Station, G. T. R. and C. P. R.

Silver Creek Holsteins

Official records range from 13 lbs. for 2-year-olds to 22 lbs. for mature cows. Stock bull, King Fayne Segis Clothilde, his 7 nearest dams' records average 27 lbs. For sale are young stock of both sexes, sired by bull with high official backing and out of Record cows. A. H. TEEPLE, Currie's P.O., Ont., Woodstock, Sta. Phone connection.

Holstein - Friesians

FAIRVIEW FARM offers young bulls, sired by Pontiac Korndyke and Rag Apple Korndyke, without question the two greatest Korndyke bulls in the world, and out of cows with large A. R. O. records and testing 4 1/2 fat. Come and see them or write. E. H. DOLLAR, Heuvelton, N. Y. Near Prescott.

CENTRE AND HILLVIEW HOLSTEINS

Offers a number of young bulls: One born Oct. 5—more black; his dam gave at 5 years old 418 lbs. milk and 17 1/2 lbs. butter; his sister, at 4 years old, gave 416 lbs. milk and 17.13 lbs. butter in 7 days; his sire is Brookbank Butter Baron, who has a number of A. R. O. daughters—one 23.66 lbs. butter in 7 days at 3 years old. Price \$60 if sold at once. A few 2-year-old heifers from B.B.B. for sale. P. D. EDE, Oxford Centre, Woodstock Station. Long-distance telephone.

MAPLE HILL HOLSTEIN - FRIESIANS SPECIAL OFFERING:

Four-year-old cow, fresh last October; bred April 23rd to Choicest Canary, whose dam is the highest seven- and thirty-day record cow in Canada. G. W. CLEMONS, St. George, Ont. Bell phone.

HOLSTEINS AND YORKSHIRES

R. HONEY, Brickley, Ont. Northumberland Co. Offers a choice lot of boars and sows ready to mate; also orders taken for the coming crop of calves from Prince Posh Calamity Bleske and R.O.F. cows.

The Maples Holstein Herd

of Record-of-Merit cows, headed by King Posch De Kol. Nothing for sale at present except choice bull calves from Record-of-Merit cows. Also one or two good cows.

WALBURN RIVERS, FOLDEN'S, ONTARIO

BRAMPTON Jerseys CANADA'S GREATEST JERSEY HERD We are offering for sale one 2-year-old bull and four yearlings, fit for service; also six bull calves; females of all ages. Come and see them or write. B. H. BULL & SON, BRAMPTON, ONT.

WANTED!

Ten Jersey Heifer Calves, from 2 to 4 months old, eligible to register. Send description, with lowest cash price, to: High Grove Stock Farm P. O. Box 111, Tweed, Ont.

Absent-minded Professor (meeting a friend unexpectedly on a mountain peak) —Hello! Did you climb up from below?

The **EMPIRE** Line  
 "Everything that's good in Cream Separators"  
 Empire Cream Separator Co. of Canada, Ltd.  
 WINNIPEG TORONTO SUSSEX, N.B.

Cut out, fill in and send this coupon to us by next mail and you will receive by return mail a most interesting and instructive book for dairymen. Act promptly.

Name.....  
 P. O. Address.....  
 Province.....

**Bad Blood Means Bad Health.**

**BURDOCK BLOOD BITTERS**  
**Makes Good Blood and Good**  
**Blood Means Good Health.**

Mrs. Fred Biggs, Kingston, Ont., writes:—"I was completely run down, my blood was out of order, and I used to get so weak I would be compelled to stay in bed for weeks at a time. I could not eat, and was pale and thin; everyone thought I was going into Consumption. I tried everything, and different doctors, until a friend advised me to use Burdock Blood Bitters. "I did not have one bottle used when my appetite began to improve. "I used six bottles. "I gained ten pounds in two weeks. When I began to take it I only weighed ninety-three pounds. It just seemed to pull me from the grave as I never expected to be strong again. I will tell every sufferer of your wonderful remedy." Burdock Blood Bitters is manufactured only by the T. Milburn Co., Limited, Toronto, Ont. See that their signature appears on every bottle.



**ELECTRIC BEANS**

Stand supreme as a Blood and Nerve Tonic.

They are unequalled for Biliousness, Sick Headache, Constipation, Heart Palpitation, Indigestion and Anæmia. Those who are in a position to know what is best use "ELECTRIC BEANS."

Write for Free Sample

80c. a Box at all Dealers or upon receipt of price, from THE ELECTRIC BEAN CHEMICAL CO. LTD., OTTAWA.

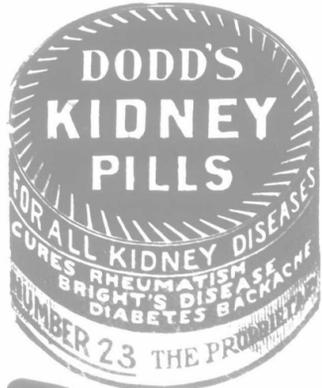
**A LEFT-HANDED COMPLIMENT.**

In anticipation of the Bishop's regular official visit to a certain rural Anglican Church, great preparations were being made with a view of giving that worthy a grand reception. The Rectory grounds were profusely decorated, but when the committee began to cast about them for a supply of bunting, the only thing available was a string of old marine signal flags. Those were hoisted, however, and the decorations were completed.

On the outskirts of the little crowd, congregated to await the arrival of the Bishop, was an old "deep-water" captain, who seemed very ill at ease. Finally, when he could contain himself no longer, he rushed up to the rector and exclaimed: "If I were you, sir, I'd haul those flags down before the bishop arrives!"

"Why so, Captain?" demanded the rector. "I consider they add greatly to the decorations."

"Well, sir, of course you can suit yourself, but I thought I had better tell you. Those are signal flags, and if my code-book is correct, they read: "In distress: wants a pilot."—Courier.



**QUESTIONS AND ANSWERS.**  
 Miscellaneous.

**FALL PASTURE.**

What grain is best to sow about last of July for milch cows for pasture in the fall? Is rye, or rye and oats good; or is there any crop that would be better for pasture?

Ans.—This is a difficult question to answer satisfactorily. The crops you suggest, more especially the rye, would undoubtedly produce a certain amount of fall pasture, perhaps as much as anything else that could be used, except rape, which, for milch cows, is tabooed. Probably Hungarian would make more growth during the hot weather, but it is not a very satisfactory crop for grazing purposes, as it forms little bottom, and is readily trampled up in moist weather. You might try a little of two or three seedings, say rye, rye and oats mixed, and Hungarian grass. Experience of readers might be helpful.

**CHICKS DIE IN SHELL.**

Would you kindly let me know, through your valuable paper, what is the cause of young chicks dying in the shell, after the eggs have been chipped. The shell does not appear to be dry, the eggs being hatched in an incubator.

Ans.—A. W. Foley, in "The Farmer's Advocate" of June 27, 1907, says, in part, regarding this trouble: "This trouble is due to the fact that the breeding stock is lacking in constitution and vitality necessary to produce the germ with sufficient vitality to incubate a strong, healthy chick." The lack of constitution may arise from various causes, which Mr. Foley enumerates. There are a number of explanations for the trouble you indicate. Sometimes chickens smother in the shell after chipping it; sometimes lack of moisture is the cause. It is a question which has been discussed pro and con to a great extent by investigators. Each has his guess, but no very definite conclusions can be generally stated.

**UMBILICAL HERNIA.**

Colt, three months old, has navel rupture as large as a medium-sized apple. The colt is smart and doing well. Should it be cared for, or will it get all right in time?

Ans.—The rupture is so large that it is probable a spontaneous cure will not transpire. It is advisable for you to try a truss. Put a leather or strong linen bandage about four or five inches wide around the body. Make a pad about the size of a small, deep saucer, on the bandage, to fit over the rupture to keep it in the abdominal cavity. Have straps and buckles or strings to fasten the bandage so you may regulate its tightness. By means of straps or strings attached from the anterior margin of the bandage to a strap around the neck, prevent the bandage from slipping backwards. The idea is to arrange the truss so that it will not shift, yet not have it tight enough to scarily. Keep this on for three or four weeks, and if it does not effect a cure, call in your veterinarian; an operation will be necessary.

**DIRECTION OF THE MAGNETIC NEEDLE.**

Does the needle point in exactly the same direction now as it did, say two years ago? If not, why? Does it point to the North Pole or the North Star?

Ans.—The axis of the earth is the imaginary line running through the center of the earth, around which its diurnal rotation takes place, of this the North and South Poles are the ends, and this North Pole points true north. The point where the electric needle has an inclination of 90 degrees, or stands directly on end, is called the magnetic North Pole of the earth. This does not correspond exactly with the true north, and is found to be gradually and continually changing, moving westward in America since the first of the last century. The axis of the earth more nearly points towards the North star than does the electric needle. The reasons for the variation in deflection of the needle, would recommend you to refer to a good text on electricity and magnetism, as it is too long for discussion here.

**Springhill Ayrshires** Headed by two bulls whose dams have the highest official records in Scotland. Order a bull calf out of our best cows.

We can please you in all ages and sexes. Robt. Hunter & Sons, Maxville, Ont.

**Springbank Ayrshires!** Canada's leading herd of Record-of-Performance Ayrshires. Big records, big cattle, big udders and big teats. Over 50 head to select from: 13 yearling heifers, 7 yearling calves. All in good condition. A. S. TURNER, RYCKMAN'S CORNERS, ONTARIO, 3 miles south of Hamilton.

**Ayrshire Cattle** Of the choicest producing strains. Record of Performance work a specialty. Good udders. Good teats. Good records. For particulars write: WILLIAM THORN, Trout Run Stock Farm, Lynedoch, Ontario.

**Cherry Bank Ayrshires!** Present offering: One yearling and three last fall bulls. All good ones, with good breeding; also females any age, and calves of either sex. Write for prices. P. D. McArthur, 3 1/2-mile from Howick station, North Georgetown, Que.

**STOCKWOOD AYRSHIRES** Are producers of milk testing high in butter-fat. In my herd I have a range of selection, either imp. or Canadian-bred, of either young bulls or females, unexcelled in Canada. Price and terms to suit purchaser. D. M. WATT, ST. LOUIS STA., QUE.

**Ayrshires and Yorkshires!** We still have a few choice individuals of almost any age on hand in Ayrshires, and are always ready to price any. Other breeders in this section. Bull calves from Record of Performance cows. A few young Yorkshires on hand. Long-distance phone. ALEX. HUME & CO., MENIE, ONT.

**Ayrshires** Bull calves, from 3 months to 9 months, from imported sire and Record of Performance dams. Records 50 to 65 pounds per day. N. Dymont, Clappison's Corners, Ont.

**Stonehouse Ayrshires** 30 head to select from. All imported or out of imported sire and dam. For sale: females of all ages. Am now booking orders for bull calves. Hector Gordon, Howick, Quebec.

**LABELS** Metal Ear Labels for Cattle, Sheep and Hogs. The old standby for all who have stock liable to stray, or to dispute as to identification or ownership; for herd or flock records, or for general convenience. Send for free circular and sample. It may save you much trouble. Write to-day. F. G. JAMES, ROYMANVILLE, ONTARIO.

**FARNHAM OXFORD DOWNS** The Champion Flock, First Importation, 1881. Our present offering is a grand lot of ram lambs for flock headers, from our imported champion ram, and a number of them from imported ewes. Also a first-class imported yearling and a two-shear ram. Fifty superior yearling ewes, and a number of ewe lambs. We are also offering a few large Hampshire ram lambs from imp. sire and dam. Long-distance phone on the farm: Central, Guelph.

**OXFORD RAMS WANTED.** Parties having Oxford rams for sale are requested to write the undersigned, stating age of rams, weight, price, and if recorded. PETER ARKELL & SONS, Teeswater, Ontario.

**Fairview's Shropshire Offerings:** Their breeding is of the very best, and for 26 years they have proved their superior quality in the leading show-rings, including three World's Fairs, where the Fairview exhibits won more section, flock, champion and special prizes than all competitors combined. That's the kind we now offer. For a flock header or a few ewes, write for circular and prices to: J. & D. J. Campbell, Fairview Farm, Woodville, Ont.

**Newcastle Tamworths and Shorthorns** FOR SALE: Young sows due April and May, by imp. boar, dams by Colwill's Choice, Canada's Champion boar in 1901-2-3-4; also choice pigs, both sexes. Two yearling Shorthorn bulls, Syme and Lavender families, and six choice heifers and heifer calves. Prices right. Bell phone. A. A. Colwill, Box 9, Newcastle, Ont.

**Willowdale Berkshires!** Nothing to offer but suckers and three extra choice young sows, bred to farrow May and June. Be quick if you want one. J. J. WILSON, Importer and Breeder, Milton P. O. and Station. C. P. R. and G. T. R.

**Monkland Yorkshires** With very nearly 100 sows in breeding, of modern type and high-class quality, our herd will stand comparison with any in Canada. We are always in a position to fill large or small orders with despatch. Long-distance phone. JAMES WILSON & SONS, FERGUS, ONT.

**Hillcrest Tamworths** are second to none in America for type and quality. For sale are both sexes and all ages, from sows bred and bred for service down to youngsters. Herbert German, St. George, Ont.

**SUNNYSIDE CHESTER WHITE HOGS.** I am now offering some very choice young things of both sexes, of breeding age. A few Shropshire sheep of both sexes. A number of Bronze turkeys and toms, and Red Cap cockerels and pullets. W. E. WRIGHT, Gleanworth P. O., Ont.

**MORRISTON TAMWORTHS** A grand lot of litters from 1 to 10 mos., also young sows (dandies). Some just bred. Some in farrow to first-class boars from best herd in England. Prices right. Chas. Currie, Morriston, Ont.

**DUROC JERSEY SWINE** Imported and home-bred. Sows ready to breed. Boars fit for service, and younger ones either sex. Also Embler sows. MAC CAMPBELL & SONS, HARWICH, ONT.

**MAPLE GROVE YORKSHIRES.** To make room for the natural increase in our herd, we now offer for immediate disposal: 25 choice young and very typical sows, an exceedingly choice, easy-feeding bunch. Many of them sired by M. G. Champion, 2002, a champion and silver-medal boar at Toronto in 1907, and first as a three-year-old in the aged class in 1908, a grand stock-getter. Many of our sows are prize winners, and are of the best Yorkshire blood in England and Canada. In Feb., Mar., and April pigs are not related. We are putting prices low, because we must sell. Satisfaction guaranteed.

**H. S. McDIARMID, Fingal, Ont.** Sheldon Station. Long-distance phone in house.

**MAPLE LEAF BERKSHIRES** For sale: Young sows bred and ready to breed; boars fit for service; also young pigs farrowed in March and April. Imp. sires and dams. Pairs for skin. C. P. R. and G. T. R. JOSHUA LAWRENCE, Oxford Centre P. O., Ontario.

**LARGE WHITE YORKSHIRES.** Have for sale at the present time a fine lot of young sows bred to imp. boar, due to farrow end of May; also boars ready for service. A good lot of spring pigs. Pairs supplied not akin from large stock from the best British herds. Long-distance Bell phone. C. P. R. & G. T. R.

**H. J. Davis, Woodstock, Ont.**



# CEMENT FACTS For Farms

My  
services  
are  
free  
to you

The companies which sold **millions of barrels of cement last year** in Canada want to get every farmer in this great land of ours awakened to the value cement has for him as a building material. So they pay me to tell you anything you want to know about cement. You **pay me nothing**.

Consult me  
without  
cost

I will show you why cement is cheaper than lumber for any farm use—from fence-posts to mansions or dairy-barns. I will tell you in plain, understandable English just how to choose and use it to get the kind of **money-saving** results you ought to get when you build **anything**. All you are to do is to send me your name and address and state what you might think of building for **less money** if I show you how.

Write and  
ask questions!

I am here to answer any question you want to put concerning cement as a building material. Just write me **no charge**.

**Cement—the one building material without a fault.**

The right cement—I will tell you how to know it—used right—I will tell you how to use it as well as any expert—lacks every fault of **every** other building material and has merits **no other material** can pretend to at all. You should learn all about it. I will post you on it absolutely without cost to you.

Enduring — Economical — Efficient

Cement is the most durable of all known building materials. Structures are standing to-day that were built of cement when Cæsar ruled in Rome. Man, and not the elements, have harmed them a little; yet they could be cheaply restored to-day. And the ancient cement did not begin to compare with the cement of 1910. Not even granite or marble will stand the weather and the tooth of Time as will this wonderful artificial stone. Not even steel will stand the strains a cement structure will stand—built right. I tell you how to do the building—and I charge you nothing for the instruction.

Cheaper than lumber by far

Yet, for all this amazing durability, this matchless efficiency and strength, cement construction is **cheaper than the cheapest lumber**. That is as true if you want to make a score of fence-posts as though you were building a fine residence or a dairy-barn. Less costly than lumber! Think of it! Doubt it—as you do, perhaps; but let your doubts sleep until I send you the **free proof** I have ready to mail when I hear from you.

Fireproof — Damp-defying

And remember while you are making up your mind to write me for my **free advice**, that a cement structure of **any** kind, is **fire-proof**; cannot decay; cannot dry-rot; needs no painting nor repairs; and **keeps out every trace of dampness** from the interior. It is the **one** perfect **protection against heat and cold**. It shelters better. It looks better. It is the **one practical building material**—and the **only** really **economical** one.

Easy to handle — Learn why

You may think cement needs a high-priced expert to handle it right. I will make a skilled cement worker of **you**—if you will just ask me about it. There is not room here to tell you; but I will **prove** it to you—and I will not charge you a cent for the **proof** nor for the valuable cement-wisdom I am waiting to impart to you. There is no 'catch' about this. I will not canvass you to buy anything. I simply want you to **know cement**. And there are many reasons why you should.

WRITE AND ASK ME

**ALFRED ROGERS** THE CEMENT MAN

323 Elias Rogers Building - TORONTO